# Meet The Professors:

*Oncologist and Nurse Investigators Consult on Challenging Cases of Actual Patients*

*Proceedings from a Four-Part Satellite Symposia Series Hosted in Conjunction with the 2010 Oncology Nursing Society Annual Congress*

## BREAST CANCER

### INTERVIEW OF MAUREEN MAJOR CAMPOS, RN, MS BY AVIVA ASNIS-ALIBOZEK, PA-C, MPAS

#### ROLE OF AGE AND PERFORMANCE STATUS IN BREAST CANCER TREATMENT ALGORITHM

**MS ASNIS-ALIBOZEK:** The first question from our audience members was whether you generally use age or performance status as a cutoff when deciding on treatment approaches.

**MS MAJOR CAMPOS:** We typically use functional status as the criteria for cutoff. Quality-of-life data support that use in clinical practice.

**MS ASNIS-ALIBOZEK:** In addition, this would be your approach for elderly patients? This was a common question from the audience.

**MS MAJOR CAMPOS:** Yes, it really is the collaborative approach to patient assessment. Typically new patients meet with nursing colleagues as well as the physician providers, and we evaluate the different avenues, especially in the older patient population. We look at functional status. What is their quality of life? A 40-year-old or a 60-year-old could have varied quality of life and not be appropriate candidates for aggressive adjuvant therapy. The same holds true for the other end of the spectrum — older patients who have a great quality of life — they're high-functioning, they may or may not be working any longer, but they're very active. They're active in terms of exercise and social activities.

The other piece we carefully evaluate is their support systems, and is there somebody there to help that elderly patient through the chemotherapy process or through the treatment process.

**MS ASNIS-ALIBOZEK:** Many comments related specifically to chemotherapy. What was the age of the oldest patient to whom you've administered chemo?

**MS MAJOR CAMPOS:** I have a patient who is 76 years old. She currently lives alone, but has multiple family members that live close by, and she is still active. Although she doesn't work for a living, she volunteers her time in her children's hardware business.

She presented with a Stage II, node-positive breast cancer, and there was a lot of discussion about whether or not we would consider chemotherapy, with one option being AC followed by paclitaxel.

We first reviewed the patient's medication history, her past medical and surgical history, her support systems and what her activity level was. All of those factors were very high functioning. She wasn't currently taking any medications except for a hydrochlorothiazide 25-mg tablet once a day for some mild hypertension. She embarked on a course of AC.

Following the AC, there was a second discussion about whether or not we would move on to the taxane or not. She fared well on the AC regimen. She had no neuropathy or skin changes after the AC, so we embarked on a course of paclitaxel, which was administered once every two weeks with pegfilgrastim. She continued to fare well. She completed treatment, and she is currently disease free.

#### DETERMINING HER2 STATUS WITH IHC AND FISH

**MS ASNIS-ALIBOZEK:** Another common question relates to determining HER2 status. Would you explain the differences between immunohistochemistry (IHC) and fluorescence in situ hybridization (FISH)?

**MS MAJOR CAMPOS:** There are two forms of testing for HER2 overexpression or amplification. IHC is looking at protein overexpression, and FISH is looking at gene amplification. We practice according to the present guidelines, which state that every base specimen gets tested for HER2 expression. We do all of our testing by IHC as a first run.

If a patient has an IHC 3+ result, we perform no further testing, and determine that patient to be HER2-positive and a candidate for trastuzumab therapy. If a patient has an IHC 1+ result, we would consider that patient HER2-normal, or negative, and not a candidate for trastuzumab therapy. If a patient has an IHC 2+ result, we would refer them for FISH testing as a second phase, in an attempt to get a more definitive answer as to the patient's HER2 status.

A FISH score of 2.2 or greater is considered HER2-positive. Anything 1.8 or less is considered HER2-negative, and patients who fall in that span between 1.8 and 2.2 are considered equivocal. Once we have those results, then we evaluate the patient and determine whether or not they would be an eligible candidate for trastuzumab therapy, based on the tumor and the disease and the patient's profile.

Also, if we have a patient who presents and we perform the IHC testing and it comes back as normal, but there's some suspicion based on the patient's presentation, we would consider retesting that tumor for FISH, as the FISH assay is more specific in terms of accurate results.

**MS ASNIS-ALIBOZEK:** Along those lines, if a patient is initially classified as having HER2-positive disease, can this change over time?

**MS MAJOR CAMPOS:** The patient's HER2 status may change in terms of if there were to be a recurrence of their cancer. We have seen some biopsies of metastatic deposit that has been HER2-negative, where the patient was assumed to be HER2-positive. We would typically evaluate the additional molecular profile of that patient to ascertain whether we're looking at a different tumor or if we've just changed the course of events with trastuzumab therapy.

**MS ASNIS-ALIBOZEK:** The same audience member asked, can this phenomenon occur in ER and PR staining as well?

**MS MAJOR CAMPOS:** Yes, it can, especially with the evolution of testing and the improvements in testing and biopsies. We've seen patients who were initially diagnosed with ER-negative, PR-negative disease who are later found to have ER-positive, PR-positive disease, or vice versa.

## CARDIAC MONITORING FOR PATIENTS WITH HER2-POSITIVE BREAST CANCER WHO HAVE RECEIVED TRASTUZUMAB

**MS ASNIS-ALIBOZEK:** We received a lot of questions about the use of ECHO versus MUGA. Which do you prefer?

**MS MAJOR CAMPOS:** We typically use a MUGA to evaluate cardiac status. I believe the most important factor is consistency. We shouldn't be altering testing platforms. So, if a patient initiates with MUGA evaluation, we should continue with the MUGA evaluation. If they start with an ECHO, we should continue with the ECHO.

Occasionally, we have used one to support the other — for instance, for a patient with a very high ejection fraction on a MUGA for whom we were suspicious that perhaps a hyperdynamic state existed and there was a problem with the testing. We would then potentially request an echocardiogram for that patient.

**MS ASNIS-ALIBOZEK:** How long after completion of trastuzumab should cardiac studies continue?

**MS MAJOR CAMPOS:** We are typically following the patient for about 18 months after completion of treatment, and then as needed. Certainly, patient history could dictate. If they have a new complaint of shortness of breath or sudden fatigue or unexplainable weight gain, we would certainly look at repeating that ejection fraction.

## USE OF LAPATINIB ALONE OR IN COMBINATION WITH CAPECITABINE IN TRASTUZUMAB-REFRACTORY DISEASE

**MS ASNIS-ALIBOZEK:** The next question relates to the use of lapatinib and capecitabine. When do you typically use these two agents in your practice?

**MS MAJOR CAMPOS:** There are different scenarios. In the adjuvant setting, if a patient has completed trastuzumab-based therapy and experiences disease progression within a year, we would potentially consider giving that patient a course of lapatinib and capecitabine.

Another scenario is a patient who has had short durations of response or no response on trastuzumab combination therapy. We would then consider giving that patient lapatinib. If they haven't received capecitabine, we would combine it with that.

**MS ASNIS-ALIBOZEK:** And generally speaking, if a patient experiences a response to trastuzumab in the metastatic setting, would you switch chemotherapeutic agents and continue the trastuzumab at progression?

**MS MAJOR CAMPOS:** Generally, that is what we do in our practice.

## EFFICACY AND TOXICITY OF TCH VERSUS AC → TH IN THE BCIRG 006 TRIAL

**MS ASNIS-ALIBOZEK:** Another question is as follows: Is toxicity the only important factor in recommending TCH versus AC → TH, or does efficacy play a role?

**MS MAJOR CAMPOS:** That's a good question. There has been a fair amount of discussion around using TCH for patients who are elderly, who have a prior history of any cardiac compromise or hypertension, but really not a discussion of if you have a patient that is healthy and doing well, would you ever administer TCH solely because you think it's a better drug or a worse drug, but you're using it only because of toxicity purposes.

In my experience, it's regional. I believe a lot of institutions use TCH, and other sites use AC → TH. I believe based on the BCIRG 006 study, the efficacy is similar. Maybe a little bit less for the TCH chemotherapy. However, we know that there's an associated cardiac risk with doxorubicin, and when we combine it with trastuzumab, the risk can be more substantial. Therefore, it's intriguing for me to think even in that 40 year old, could we administer TCH chemotherapy and reduce their risk of a cardiac dysfunction in the future? We know that with anthracyclines there is a lifetime risk. It's not just while you're getting treatment. So, it would be beneficial if we can reduce that risk of cardiomyopathy or cardiac insufficiency.

## PREMEDICATION PRIOR TO PACLITAXEL ADMINISTRATION

**MS ASNIS-ALIBOZEK:** Would you explain the differences in premedication administration between weekly and every three-week paclitaxel?

**MS MAJOR CAMPOS:** At our institution, for weekly paclitaxel, we typically premedicate with 10 mg of dexamethasone IV at time of infusion. For the every three-week dose, we tend to utilize 20 mg by mouth 12 and six hours before treatment. The one aspect with weekly dosing that we do is after four weekly treatments, we would consider weaning down the dexamethasone dose if the patient is not having any hypersensitivity reactions to the paclitaxel.

## DELAYED DEVELOPMENT OF TREATMENT-RELATED NEUROPATHY WITH TC

**MS ASNIS-ALIBOZEK:** One viewer asked if it is common in your practice for a patient who has received TC therapy and experienced no neuropathy to develop this side effect one year after their last dose?

**MS MAJOR CAMPOS:** It is uncommon in my experience for a patient to be asymptomatic and at one year post-treatment develop a neuropathy syndrome. I would certainly look for other possibilities or etiologies of that neuropathy. If nothing presents itself — there's no diabetes, there's no neurological insufficiencies — I would guess that perhaps the taxane in TC chemotherapy could be a potential cause of the neuropathy. But I would certainly look elsewhere before I just assume one year post-treatment a patient develops a new symptom, it's related to the infusion they received a year ago.

## SIDE EFFECT COMPARISON OF *NAB* PACLITAXEL TO DOCETAXEL AND PACLITAXEL

**MS ASNIS-ALIBOZEK:** Several inquiries were posted with regard to the side effects of *nab* paclitaxel. Can you compare this agent to the other taxanes?

**MS MAJOR CAMPOS:** *Nab* paclitaxel is a different product than either paclitaxel or docetaxel. We know with *nab* paclitaxel there's a quicker recovery, and there is some neuropathy associated with the infusion, although the neuropathy can be shorter in duration in terms of patients' symptoms or patient complaints.

## COMPARISON OF THE SELECTIVE ESTROGEN RECEPTOR MODULATORS (SERMS) TAMOXIFEN AND RALOXIFENE

**MS ASNIS-ALIBOZEK:** Next, would you explain the difference between tamoxifen and raloxifene?

**MS MAJOR CAMPOS:** Both tamoxifen and raloxifene are selective estrogen receptor modulators. The indications for usage are very different. Tamoxifen is indicated in the adjuvant treatment of an ER/PR-positive breast cancer. Raloxifene has been approved for osteopenia treatment, or bone loss treatment, as well as we've looked at it being used as a chemo preventative agent. Raloxifene is not indicated in the treatment phase of breast cancer, early stage disease.

**MS ASNIS-ALIBOZEK:** Continuing with a patient who is receiving tamoxifen, could she be prescribed a selective serotonin reuptake inhibitor (SSRI)-based antidepressant?

**MS MAJOR CAMPOS:** It is not recommended that we use SSRIs with tamoxifen-based therapy. We're very concerned about the CYP2D6 pathway and the potential that an SSRI could reduce the effectiveness or the metabolization of tamoxifen. Any SSRI needs to be carefully evaluated by the provider and the patient. The oncologist should be consulted by the prescriber of the SSRI, whether it is a psychologist, psychiatrist or an internist, as to the definite need for that medication or the benefit of that medication.

## BEVACIZUMAB: MECHANISMS OF ACTION AND SIDE EFFECT PROFILE

**MS ASNIS-ALIBOZEK:** Can you explain for our audience the mechanism of action of bevacizumab and the anticipated side effects?

**MS MAJOR CAMPOS:** Bevacizumab is an anti-VEGF agent. VEGF is a protein that supports blood vessel formation. Bevacizumab shuts off the factors that promote vascularization of the tissue. There are several things, or sequential side effects, that we have to worry about. The most common one that we see is hypertension. However, it can be well controlled with antihypertensive medications, but it is something that we closely monitor for.

Some other possible side effects include nostril bleeding and poor wound healing. Thus, in a patient scheduled for a surgical procedure while on bevacizumab therapy, we would be counsel to hold the bevacizumab prior to and for a period of time after the surgical procedure.

**MS ASNIS-ALIBOZEK:** One viewer commented on the FDA's Oncologic Drugs Advisory Committee (ODAC) and their recent vote to remove bevacizumab's indication as a first-line therapy for metastatic breast cancer. In your practice post the ODAC recommendations and prior to any FDA decision, are you all still recommending bevacizumab for patients with metastatic breast cancer?

**MS MAJOR CAMPOS:** We're awaiting the information, but we are still recommending bevacizumab in our patient population. We also have some clinical trials evaluating bevacizumab with different agents.

## PERSPECTIVE ON USE OF ALTERNATE THERAPIES FOR PATIENTS WITH BREAST CANCER

**MS ASNIS-ALIBOZEK:** And finally, what complementary treatment or measures do you recommend or have you found beneficial for patients with breast cancer?

**MS MAJOR CAMPOS:** In terms of complementary therapy or recommendations, we are very cautious in our recommendations of vitamin therapy or herbs. We are more supportive of alternative recommendations, such as massage therapy or reflexology. In fact, we provide each of our patients "coupons" to attend at least two sessions of massage therapy while they're on treatment to help support that sense of loss of control and anxiety that patients often complain of while they're on treatment. They receive two free visits, and then they can decide whether or not they want to continue on at a reduced price.