

## Managing Your Weight After Breast Cancer

Faith D. Ottery, MD, PhD, FACN

**MODERATOR:** My name is Amy [Lessack]. Like all of you, I am a breast cancer survivor. I was diagnosed in 2002. I have the BRCA2 gene. I had bilateral mastectomies. I chose to have a hysterectomy. I had chemo, radiation, oral chemo – basically, the kitchen sink. I gained 35 pounds during and after chemo. I like to tell my oncologist that 10 of [those pounds] were [a result of] the Taxotere [I received] once a week for 12 weeks, [along] with the steroid – I felt like I couldn't eat enough because I never felt as though I'd finished eating. Ten [pounds] were a result of taking] Aromasin, so I switched to Femara, which I'm on now. And the other 15 [pounds] I own, unfortunately. I've been trying to lose [the weight] ever since, and it's [been] a lovely roller coaster – so I am here and ready to learn. I'm excited to have everybody here today.

I am thrilled that we have Dr. Faith Ottery here today. She is charming, so we're going to have a great session. So she is the senior director of medical affairs and the medical brand leader at Savient Pharmaceuticals, Inc. She is the founder of the Society for Nutritional Oncology Adjuvant Therapy, an international interdisciplinary research and educational institution. Dr. Ottery developed the Patient-Generated Subjective Global Assessment [PG-SGA] – which is a big name for something that, she says, is used all over the place and is really helpful. [It's] a clinical and research tool that has been accepted as the standard in oncology by the American Diabetes Association [<http://www.diabetes.org>] and the Oncology Nursing Society [<http://www.ons.org>]. She is credited with defining the concepts of nutritional oncology and anabolic competence. Dr.

Ottery has lectured nationally and internationally on topics related to nutritional oncology and supportive care. She is the chair of the cancer rehabilitation and survivorship study group of the Multinational Association of Supportive Care in Cancer [<http://www.mascc.org>]. She was trained in medical oncology, and she was trained and [she] practiced in surgical oncology. She is a medical advisor for the board of LBBC [Living Beyond Breast Cancer; <http://www.lbbc.org>], and she has a PhD in nutrition. Clearly, she is highly qualified [and] well trained, [and she] has certainly interacted with [inaudible] situation. We're excited to have her. (Applause)

### **FAITH D. OTTERY, MD, PhD,**

**FACN:** Thank you very much. I'm extremely pleased to be here ... [This] workshop [is] about managing weight. It's interesting; I saw a couple of thinner women earlier, on the first day [of the conference], and they [each] said, "I'm not coming to your [workshop]. I haven't gained weight. Look at me." I said, "No – the workshop isn't about managing weight *gain* or managing weight *loss*. It's [about] managing *weight*."

Weight has a lot of different components. We'll talk about fat – which, unfortunately, many of us are experts at. We'll talk about muscle, which many of us would like to be experts at. Then [there's] bone, which is another part of our weight. We'll talk about all of those things. Two out of the three [components of fat, muscle and bone], no matter how thin or how fat [we are], are consistent across all [people]. In addition, [we'll talk about] developing a wellness plan that includes a healthy diet and exercise, [which] can enhance your physical appearance, reduce

stress and a lot more, and [we'll talk about] your overall fitness goals [and improving your health and well-being] through nutrition, movement and lifestyle choices.

I'd like to know something about you. Why are you [at this workshop] today? Is your weight higher than you'd like? Who [weighs less] than they'd like to? ... [Have you] gained or lost weight since your diagnosis? Now, some of us were heavier than we wanted to be before we were ever diagnosed. But this is the reason [we're discussing this issue today: a lot of people agree with the idea that,] if and when [they] lose or gain weight, [they will] feel better, [their] energy will improve, [they'll be happier about the way their] clothes fit, [they'll] feel more like [their old selves, they'll] feel healthier – [they'll] *be* healthier. I was tempted to also [mention] sexuality there, but I wasn't quite sure how I wanted to put that. But I'm sure we've got plenty of [people who are interested in] that one. (Laughter)

Why am I here? The picture of the people in the upper corner are my mom and my dad. My mom was diagnosed [with breast cancer]. Several other members of my family have had breast cancer. So I speak [today] from a clinician's standpoint, from a family member's standpoint and, perhaps, as a [future] survivor, unfortunately, because of my family history. My mom did well for over 20 years after being diagnosed, in her forties, as a premenopausal woman. Now, it was a misdiagnosis ... [but still] she did well. She went on and got her master's degree and was going for her PhD. [Breast cancer] can [sometimes] be an interesting gift that life gives us.

I was a breast surgical oncologist for about a decade at Fox Chase Cancer Center in Philadelphia [<http://www.fccc.edu>]. I have a PhD in nutritional science, and [I have] a severe frustration – which, I think, some of [you share – about the fact] that nutrition and exercise are often not included in the overall [approach to] cancer care; that many women with breast cancer have a lot of questions and concerns about this particular subject that never get addressed; that weight gain or weight loss is a daily reminder of your cancer. (Applause)

You can hide your hair loss – and, if it's necessary to lose it to take care of your cancer, you'll do it. You can hide your lumpectomy or your mastectomy – and, if it's necessary to [have a lumpectomy or a mastectomy in order] to fight your cancer, so be it. But somehow it seems totally unfair that, every time you button your clothes, [you're reminded of your breast cancer] ... I think that's a really important issue that hasn't been addressed [adequately].

There are an awful lot of practical approaches [to weight management] that can be used by anyone [and] that can impact your weight, your energy level, your sense of control, your sleep behaviors and your general health, as well as the quality and quantity of your survivorship.

A lot of people [experience changes in] weight after a diagnosis of breast cancer and during and after treatment. It can increase, decrease or stay the same, but 50 to 90 percent of women with breast cancer will gain weight if [weight management is] not addressed proactively. Now, a lot of people say, "Oh, it's my tamoxifen," or "It's my AI." Fifty to 90 percent of women [with

breast cancer,] before we had any of those [medications], were gaining weight.

[Weight changes] may be [caused] by a lot of different things ... [When I was doing surgery, some of my] patients gained a significant amount of weight. I tell [patients,] "You have a 50-50 chance, at least, of gaining a lot of weight that you don't like. So we're going to start a walking program. It's going to [help you manage this]." We'll talk about symptom management and what walking does. It will also – you've always got your equipment. You've got your feet. You've got your shoes. You can [walk] anywhere, even if you come to Jacksonville for a meeting. The bottom line is [that weight management] has to be addressed.

How many of you have been pregnant at some point in your life? Wasn't it kind of this nice thing – "Well, I'm eating for two?" (Laughter) Well, there are some people – unless you tell them that they're going to gain weight, they will think, "Everybody with cancer that I've ever known has lost weight, so [I can eat whatever I want]." Show of hands – how many of you were told, at the time of your diagnosis, that you had an excellent chance of gaining weight [while] going through treatment? Good; that's improving over the years. [But] that means that [those who didn't raise their] hands didn't hear that ahead of time.

A decrease in weight can be related to [treatment] symptoms, such as nausea and vomiting ... Sometimes people will say, "My medical oncologist doesn't want me to lose weight during treatment." Okay, but if you start eating much healthier foods than you have been – if you stay away from the Big

Macs and a few other things – you may experience a healthy weight loss. That's different than [weight loss that's associated with] lung cancer or pancreatic cancer. Or [weight loss that's the result of] unhealthy changes – I've had patients who, all of a sudden, just became so compulsive about things that it was unhealthy. [And, if weight maintenance is desired, then it becomes an issue of balancing] the energy [, in the form of calories, that come] in and the energy [that goes] out.

Have you wanted a good excuse for gaining weight after treatment? [Whether we gain, lose, or maintain our weight is due, in part, to our individual] baselines. Life is pretty unfair in one [way]: skinny people, when they're under stress, quit eating. Heavy people, when they're under stress, start eating. It would be nice if the world [were different and we] kind of all "evened out" when these bad things happened to us, but it doesn't work that way. Our baseline diets, our baseline exercise and our eating patterns at baseline do have some impact in terms of [our] risk of gaining [weight after diagnosis and during treatment]. But a lot of people have found that nibbling helps to decrease nausea; that's probably not a bad excuse [for weight gain].

[We need to think about] changes in intake. Some handouts that are given to women who are diagnosed with cancer say that a high-calorie, high-protein diet helps to maintain your weight. Well, a different thing is needed by women who have breast cancer.

[We also need to think about] changes in energy expenditure. Even if you're as crazy as I am and run around constantly, doing things ... anybody going through this, no matter how

driven she is, tends to have decreased activity. You may still be going to work but, when you come home, that couch looks really good.

In addition, some [admittedly] poorly designed studies consistently show that metabolic rate in women who are being treated for breast cancer can actually decrease. Now, that [may be due in part to a decrease in physical activity]. But there may also be something about the treatment that changes the metabolism. There are a lot of young women, especially in this group, who may have been premenopausal [prior to treatment] and whose status changed to postmenopausal [during treatment]. As anyone who [has experienced age-related menopause knows, weight management] sometimes becomes more of an issue as we get older.

Medication [can affect weight]. Tamoxifen, AIs and chemotherapy in general can do it. Body composition [can] change also. As I mentioned before, not all weight is created equal. There's fat weight, there's bone weight, and there's muscle weight. Unfortunately, as some of us know, when people have looked at women [who have breast cancer and who have gained weight, they've found that] the fat is going up and the lean tissue or muscle is going down. That may be an important [factor in terms of a woman's] metabolic rate. It may be an important [factor in terms of her] energy level, fatigue, et cetera.

Emotion may also be a factor in weight gain or loss. If [I respond to stress by eating], I might say, "Well, I've been really good, but maybe I'll [eat] now." And one other thing: a lot of women who are getting adjuvant breast treatment have no cancer [left in their bodies at that time. People dealing with]

lung cancer; pancreatic cancer – a lot of them still have cancer in their bodies [at the time of treatment]. A lot of women who are being treated [for breast cancer, however,] have no known tumor left, so that may not have an effect ... [But] medical teams sometimes treat all cancer [patients in the same way when it comes to giving advice on diet and exercise.]

Now, most of us know what fat looks like around our tires. But it looks pretty benign up there in [the slide in] terms of these are fat cells. This [slide shows] what is called yellow fat – although, [in this slide, it] looks pretty white. There's not a lot of cellular material there; it looks like empty balloons. The interesting thing is that this little patch of fat cells is basically an estrogen-forming factory. The more fat you have, the more you're taking some of the hormones that are made by the adrenal gland and converting them into estrogen. That's one of the reasons ... there may be some implications in terms of why some people who've gained a tremendous amount of weight may actually not do as well [in terms of overall survival from breast cancer]. [Later] I'll give you some ideas on what to do to [help] reverse that.

Now, here's muscle ... this is skeletal muscle, and this is heart muscle. How many of you had Adriamycin as part of your chemo? Everybody talks about Adriamycin's potential effects on muscle, but nutrition and inactivity can [also] have an effect on both skeletal muscle and cardiac muscle. This is [the inside of the] bone. Now, most of us probably have never thought of bone in this way [with spongy parts and cells]; you can see why we tend to think of it as just this solid thing that sits there. But you can see why tamoxifen and aromatase inhibitors can actually have

effects on a number of different areas [of bone]. If you were to slice through the bone – this is what it looks like inside. So, all of those [treatments and exercise] have an impact.

In a fairly appropriately nourished human being, stored fat is metabolically inactive. The amount of body fat we accumulate or expend as energy depends on how much we're eating and exercising. But even in a person whose weight is appropriate, there may be about 150,000 calories of stored energy. [As far as needing calories to live goes,] you can go for a while without eating. That's not a good way to lose weight, because it causes your metabolism to slow down. But we do have stores [of fat in our bodies].

Lean body mass is, [for the most part,] muscle. It's metabolically active. It is essential for survival. My heart's a muscle. My legs [contain] muscles. My diaphragm is a muscle. If we don't make sure that we're getting adequate protein and that we're doing something to keep that muscle active, [we'll lose muscle mass, which will] really impact our day-to-day lives. In addition, [although there may be 40,000 calories of energy stored in our muscle tissue,] it's [never good to force the body to use up that muscle in order to access those] calories. Most of us [might] say, "Well, 40,000 [calories] ... I wouldn't mind getting rid of those." But the bottom line is this: every protein in your body has a purpose. If you're not taking in an adequate number of calories and [an adequate amount of protein], your body will actually start to utilize your muscle to meet those energy requirements. And, if you're not exercising, your body will lose muscle mass.] So it's important [to both exercise and eat right in order to maintain or build muscle].

Now, how many of you have heard [people’s body shapes described as] apples and pears? [“Apples” tend to carry fat in the stomach area; “pears” tend to carry fat in the hips, thighs, and buttocks.] We know that “apples” have a higher risk of developing cardiovascular illness. In addition, they have a higher risk of developing breast cancer and other cancers. [In terms of these diseases,] having big hips [as opposed to having a large waistline] is probably a good thing. Small boobs [and] big hips – the medical setting is probably the only place where that’s not considered a bad thing. (Laughter) [Understand] that you can be underweight and still be a pear, or still be an apple. The bottom line is this: we can’t really change our true body shape. And body shape does play a role in risk of cardiovascular disease, diabetes and insulin resistance, breast cancer, prostate cancer and other cancers.

One thing that I think is important to think about ... everything we’re talking about today is [just] as important in terms of your cardiovascular health as it is in terms of breast cancer. We all are at risk of cardiovascular illness, heart attacks, et cetera – whether or not we’ve had breast cancer; whether or not we’ve had chemotherapy – just because we’re women. The most common medical problems in women are cardiovascular. We have to remember that. How many of you [have husbands or] significant others [who are male]? How many of you worry about their health, in terms of [heart disease and other] cardiovascular issues? The things you do to help [your own cardiovascular health are things that] will also help him, and they will also help your kids.

[Let’s talk about] goals during and after treatment. If you’re at or near your ideal body weight, your goal is to try [to

maintain that; to remain] as close to that weight as you can. If you’re [overweight, focus on] health improvement – nutrition, exercise, et cetera – and aim to maintain [your weight] during treatment. If you lose a little bit of weight, cool. But [wait until] you’re all done with the treatment [to actively attempt to lose weight]. Again, that’s an important part of your long-term self-care. If you’re below your ideal body weight, [focus on] health improvement [and] aim to maintain your weight during treatment.

I gave a talk once at the NSABP [National Surgical Adjuvant Breast and Bowel Project; <http://www.nsabp.pitt.edu>], which has coordinated a lot of breast chemotherapy studies. It was a bad year for NSABP. I was supposed to get up in front of 2,000 people and talk about nutrition. Now, how interested do you think that room full of people was when they were having some questions about data?

**WOMAN:** What is NSABP?

**FAITH D. OTTERY, MD, PhD, FACN:** It’s basically a cooperative group, like SWOG [Southwest Oncology Group; <http://www.swog.org>] and ECOG [Eastern Cooperative Oncology Group; <http://ecog.dfc.harvard.edu>] ... I thought they needed a morale boost, and I wanted to tell them where nutrition fit into it all. So I said, “I can never remember what NSABP stands for, so we’re going to start calling it ‘Nutritional Stability Always Brings Pleasure.’” (Laughter) I think that’s a good slogan, because I don’t want people to gain or lose too much weight [while undergoing treatment].

This is a very depressing thought: one

pound [equals only] 3,500 calories. If I take in 500 calories more or 500 calories less each day, I will gain or lose one pound in a week. That’s if my metabolic rate stays the same, my activity rate stays the same, et cetera. Putting it into this context really gives [us] perspective [on these numbers].

[Let’s talk about] the so-called “ideal” body weight for women. [By the way,] men always get [away with having] a few more calories. It’s just unfair. [A man can eat the same number of calories as I do] and maintain his weight, [while I] gain weight. [At any rate,] the supposed “ideal,” or desirable, weight for a five-foot-tall woman is 100 pounds, and five pounds are added or subtracted for each inch of the woman’s actual height. [That number, plus or minus 10 percent, is considered the ideal range.] So, for example, the ideal weight range of a woman who’s five feet, four inches tall is 120 pounds, plus or minus 10 percent – so that’s between 108 and 132 pounds. Yeah, right. (Laughter)

Think back to [the weight you were at] when you were 18 [years old] ... Most people say, “Oh, [back then I was] skinny as a rail” ... [maybe you weren’t, but you were probably closer to your ideal weight range, and you can aim to get back to that weight]. That doesn’t have to be your initial goal, but it puts [the concept of ideal weight] into a context. [Also, knowing our ideal weight range] helps us to figure out what our protein needs are. Again – as another example – the ideal weight range of a woman who is, say, five feet, nine inches tall is 145 pounds, plus or minus 10 percent. [The “plus or minus 10 percent” is included to take into account variations in muscle mass and] body frame. Now, of course, we all claim we have large frames: “That’s why I weigh so much.” If you can [wrap

your fingers around your wrist and touch your middle finger to your thumb], you don't have a large frame. Sorry about that.

[Let's get back to] protein needs. How many of you got prednisone or another steroid during your treatment? ... It increases your appetite, but [it] sure as heck doesn't do anything in terms of your appetite for protein. Unfortunately, corticosteroids also make you lose protein. They actually make you break down your muscles. For someone who [is] not ... going through anything [such as treatment for breast cancer] – who hasn't lost a lot of weight; who hasn't lost a lot of muscle – the recommended requirement is about half a gram of protein for every pound of your ideal body weight.

Now, why would that be? Well, my energy intake – if I weigh 400 pounds, it takes me a lot [of energy] to move around. But the amount of muscle I need [is] a fixed entity; [it's] the same whether I'm five feet, four inches tall and [am at my ideal weight of] 120 pounds or I'm five feet, four inches tall and weigh 400 pounds. So this protein aspect ... Now, if you've lost weight – if you've been on corticosteroids – then you may want to aim for seven-tenths of a gram per pound of ideal weight. [But] that 120-pound woman [would require] at least 60 grams a day to meet her basic requirement in [terms of] health; about 75 grams [would be required for a woman who is at her ideal weight of] 150 pounds. There are a lot of different sources [of protein]. It can be animal. It can be vegetable. It can be a lot of the things that people here may have incorporated more [frequently] into their diets since being diagnosed.

Now, calorie requirements: If you're

overweight, multiply your current weight by 13 – that will give you your [daily] calorie goal. If you're at your desirable weight – meaning the so-called “ideal” body weight – and you want to maintain [that weight], multiply your current weight by 15 or 16. If you're underweight, multiply your current weight by 18. Fever, corticosteroids and other things may have an impact [on your calorie requirements] also. So for that [five-foot-four-inch,] 120-pound woman ... [let's say she's large boned; let's put her in] the upper range [of her ideal body weight, which is] 132 pounds – that's a more realistic [scenario]. If you multiply that desirable weight of 132 pounds by 16, you get 2,112 calories that you need to be taking in [each day]. Now, most people say, “That's way too much. I can't lose weight [if I eat that many calories].” It depends on what kind of [food] you're getting [your calories from].

Fat-free [versions of foods] came out [when everyone was focusing on] counting fat grams [instead of calories]. Many people thought, “I can have as much [of these foods] as I want because they don't contain fat.” That isn't true, and fat-free [versions of foods] aren't necessarily more healthful than [the original versions that contain fat. And some types of fat are more healthful than others]. There was some discussion yesterday about differences [among various types of fat, such as] saturated, unsaturated, poly- and monounsaturated fats, omega-9 [fatty acids], omega-3 [fatty acids], which are the so-called “good fats,” fish oils, flax seed and others and omega-6 fatty acids.

[The goal is to limit fat intake to 20 percent of your daily calories. Let's say that you need 2,000 calories per day; 20 percent, or 400, of those calories should

come from fat. One gram of fat equals nine calories, so that's] about 45 grams [of fat]. But you want an easy way of figuring that one out? Multiply your calorie goal by two, then drop the zeros at the end – that will give you your grams of fat. I like that easy math. So the 2250 times two is 4500, drop the last two zeros and you've got 45 grams.

Fruits and vegetables: We used to talk about [eating] five [servings] a day. It's now five to nine a day. In general, the more intense the color, the more phytochemicals – [which are] anticancer, antioxidant components – there are.

Fiber: We should be taking in about 25 grams per day. [In the body,] estrogen circulates through the intestine; it's reabsorbed and goes into the liver. It's just kind of this circulating thing. We're very good at holding on to estrogen. [But, if] you've got a hormonally responsive tumor, you don't necessarily want that estrogen. It may be why you're on tamoxifen, raloxifene or other [medications]. If you take in more fiber, you can actually reduce some of that estrogen reabsorption. How many of you think you're taking in 25 grams of fiber a day? Let me give you a very practical tip: Do not go home tomorrow and start taking 25 grams of fiber a day. Your significant other may not like it. You may not like it. Your kids will make rude comments. (Laughter)

Start slowly and work up [to 25 grams per day]. If you notice that you're having problems, try something like Beano ... I've used it occasionally. I normally can take plenty of fiber. Every once in a while, though, my system does something funny – all of a sudden, [after eating] my broccoli and my other stuff, I get gassy; crampy. Who knows

why. [But] I'll take [something like Beano] for a couple of days and I'm fine again; I can eat whatever I want. But, again, do not go home and start at 25 or 35 grams, or you will say, "That darned Dr. Ottery – why did she tell me to do that?"

**WOMAN:** If you're having nine servings of vegetables, how much fiber are you getting in them? Or is [it 25 grams] in addition to your current diet ... ?

**FAITH D. OTTERY, MD, PhD,**

**FACN:** The fiber [in those vegetables counts toward your daily fiber intake]. Absolutely. In your handout, there is a [page] that [details the amount of] fiber in different fruits and vegetables, the serving size [required] to get that and so forth ... [for example,] five apricots or whatever [equals one serving and contains this amount of fiber].

**WOMAN:** Do you differentiate at all between cooked and raw vegetables; raw food and cooked food or [inaudible]?

**FAITH D. OTTERY, MD, PhD,**

**FACN:** The question is [about] cooked versus raw. The reality is that some people can't take raw vegetables. The nutrients [may be better or more plentiful] in food that's raw, but if you digest [that food] better [if it's cooked], then that's where you go. I think that [the ability to digest raw vegetables and other foods] really varies quite a bit by where people are in their treatment, how their intestines do, whether or not they're taking Beano and so forth. Clearly, if you cook vegetables – I loved my mother dearly but, unfortunately, she was not a good cook; she started cooking in the fifties, [when it was standard practice to cook all vegetables until] they were [mushy]. (Laughter) I

think the optimum thing, if you're having any problems with [tolerating] raw [vegetables], is to cook them as briefly as you can so [that they retain their nutrients and their] nice color. Don't overcook them ... you don't want to lose the nutrients.

How many people have been told [to drink] eight eight-ounce glasses of water a day? Well, if I'm Shaq [and I weigh 300 pounds], eight glasses of water ain't going to do diddly. If I am four feet, 11 inches tall [and I weigh 95 pounds], I'm going to be floating. It makes sense to [base your water intake] on your weight. Interestingly, the protein requirements [in grams] and the water requirements [in ounces] are the same. [To calculate your daily protein and water requirements, divide your ideal weight by two.] If my ideal weight is 120 pounds, for example, I [divide 120 by two, which equals 60] ... I should be taking in about [60 grams of protein and about] 60 ounces of water a day.

How many of you exercise [in some way] other than by walking on a routine basis? Good for you. How many of you are on a walking program? Very good. ... I think it is extremely interesting – and it's not something that we address a lot – that exercise and [other] physical activity have a major impact on symptom management; [if you exercise,] you actually, not surprisingly, have less fatigue. Many of the [original] studies [on exercise] were actually done in women with breast cancer. [Exercise also] can decrease nausea and vomiting, as well as the number of medications you need. A lot of people [experience] early satiety; [when they eat], they [feel full] quickly. Exercise can have an impact on that. Depending on how you time it, exercise can actually improve your sleep patterns, [and it can reduce] mood irritability and [improve]

cognitive function. Some studies indicate that exercise can have an impact on low white [blood cell] and low platelet [counts].

[Exercise can also help with gastrointestinal issues.] How many ... well, maybe we don't want to ask this one. (Laughter) I'll say it. I was constipated once in my life. Everybody has probably been constipated at least once. But what's interesting is that the transit time [of food] through the intestines is markedly improved by activity. It's also important in [that] inactivity is associated with an increased risk of colon cancer. Taxi drivers and people who never get up from their desks are at a higher risk of developing colon cancer.

[It's been shown that some] women who exercise during treatment [have less] need for pain medication. Certainly a lot of people who are on aromatase inhibitors can experience musculoskeletal effects. Some of the effects [on joints], et cetera, can be improved with exercise, [as can] performance, or functional status.

[There is a woman with a PhD in exercise] up in Alberta, Canada, who just does some brilliant work in terms of exercise and outcomes. Several centers [conducted] a randomized control study; they randomly assigned 240 women who had breast cancer [and] who were starting their chemotherapy to usual care [a control group that had no specific exercise-program intervention], to supervised resistance exercise [such as] ... weight lifting, [working out with] exercise bands, et cetera [or to] supervised aerobic [exercise, such as using a] treadmill, walking, et cetera, for the duration of their chemotherapy, which was an average of about 17 weeks. They

looked at cancer-specific quality-of-life tools [to measure whether exercise positively impacted the women’s lives], but they also looked at aspects of fatigue, psychosocial functioning, physical fitness, body composition, the women’s ability [in terms of tolerance] to complete their chemotherapy and risks of lymphedema.

Adherence to the supervised exercise [program] was [attained by] almost three out of four women – [it makes sense that,] if you’ve got something that you can control and you understand that it may make a difference, adherence is probably [going to be] very good. Aerobic exercise was [shown to be] better than usual care in terms of having an impact...Improvement in self-esteem; aerobic fitness – remember, that also has an effect in terms of cardiovascular [health], and the percentage of fat [change in the three groups] didn’t quite reach statistical significance [to show a benefit for the exercising groups over the non-exercising groups] Resistance exercise was superior to usual care [in terms of] improving self-esteem, muscular strength, lean body mass – muscle – and the chemotherapy completion rate...

Improvements in quality of life, fatigue, depression and anxiety [were experienced by] the exercise groups in general but, again, they didn’t reach statistical significance [compared to the non-exercising group]. But it’s important to note that neither type of exercise caused lymphedema or any other bad side effects.

Physical activity has been associated with decreased circulating levels of estrogen. For people who are estrogen [receptor]-positive, that’s an important issue. Although [relatively] few women

who are premenopausal have estrogen [receptor]-positive tumors, it’s still an important issue to consider. In general, lower estrogen levels have been seen among physically active women; as a result, it’s suggested that a lower level ... could potentially improve survival, although some have suggested that there’s very [little] data that directly supports this [theory] because it hasn’t been tested ... we’re just now starting some of the [studies on] exercise, [and] longer-term studies will need to be done. But a lack of physical activity, [such as] walking, has been shown to be related to weight gain during breast cancer survival periods.

Another study was published in the *Journal of the American Medical Association* [<http://jama.ama-assn.org>]... We know that physical activity has been shown to decrease [occurrence] of breast cancer. Its effect on recurrence [and on] survival isn’t known ... a prospective study, [called the Nurses’ Health Study, followed] ... almost 3,000 nurses who were diagnosed with stage I, II or III breast cancer for about a 14-year period. [The study] followed up [on each participant] until June 2002 or until the time of [that participant’s] death, whichever came first.

The details are not so important; you can read them later. But they did what was called a metabolic equivalent task. Then they said, “That’s your resting energy expenditure, and [that’s] how much energy you use when you’re up doing that activity.” Walking at an average pace was given a score of three; jogging, seven; running, 12. But, interestingly, about two out of every three women [were] walking. That [walking] contributed to the total number of hours per week [spent doing a metabolic equivalent task].

This [study looked] at prognosis. [We may think,] “Oh, do I want to talk about survival and prognosis and all that other stuff?” Yeah, because if you look at these [findings, you’ll see that] the probability of mortality – which, I think, is the opposite of what we’d like to be thinking about, but oncologists tend to think [in terms of] that ... 5 percent [probability of mortality;] 10 percent ... [the study looked at] differences in probability of mortality in people who walk at an average pace for less than one hour per week, for one to three hours per week and for more than three hours per week – [which comes out to just] a half hour a day of walking at an average pace; [it’s] important [to realize that]. You see an initial difference of three years, in terms of overall survival, in people who walk for one to three [hours per week and those who walk for] more than three hours per week. You see an increase in the difference, and you start seeing a splitting [of the groups in the findings], at seven years. And look at the difference in survival [many years] out – there’s almost a doubling of the survival [rate] in those people who walk for more than three hours per week]. Darn. There are a lot of things you can’t control. Walking is something that is not expensive. Everyone can do it. It can make a big difference.

Looking, again, at practical things [we can do – another study] looked at 377 breast cancer survivors. Some were randomly assigned to [receive] standard public health recommendations for physical activity; [others received printed materials or patient education that specifically addressed physical activity in those with] breast cancer. One group got pedometers – a pedometer counts the number of steps a person takes. One group got a combination of all of these things. The

[study, which relied on participants' reports of their activity,] looked at the number of minutes of activity [each group performed in] a week, and it looked at quality of life, fatigue, how much brisk walking they had [done] and how many steps they had taken. They took baseline [measurements] and [followed up] after 12 weeks.

The attrition rate, or dropout rate, was 10 percent; that means that 90 percent of [the] people did this [for the duration of the study]. Basically, [it was discovered that] physical activity increased by 30 minutes a week [among those who had received] the standard recommendations, by over an hour per week [among those who had received] the printed materials and by almost an hour and a half [among those who'd been given] the pedometers, whether or not they had also received the printed materials. All three groups that performed brisk walking reported a significant increase [in exercise] compared to standard, and they [reported] improved quality of life and decreased fatigue. So ... go out and buy a pedometer. Walk. Count your steps.

[Then there are] the issues of insulin resistance and insulin level – not so much insulin resistance; insulin resistance [determines] our blood glucose level; our blood sugar [determines] the insulin [level] itself. Men and women who [tend to] carry weight in their bellies, [as opposed to those who tend to carry weight in their] hips, [are at a greater risk of developing diabetes.] But, in terms of breast cancer and other cancers, it seems it's not just [about] whether or not your sugars are under control, but [also about] what's happening to that insulin level. Studies have shown that high levels of insulin, [which are] often seen in sedentary, or inactive, people, are associated with

increased risk of breast cancer recurrence and decreased survival. [One study assigned] 101 sedentary, overweight breast cancer survivors to either a 16-week cardiovascular and strength training intervention or the usual group [a control group, with no exercise intervention]. Data on fasting insulin and glucose levels, weight, body composition and waist and hip circumferences was collected at baseline and at four months.

Across the board, the insulin levels among the exercise group were reduced; there was no change in the control group. [A comparison of the two groups revealed that the change] wasn't statistically significant. But, [if] you [had taken] my baseline [four months ago] and [compared it to my level now, after] 16 weeks [of] exercise, [you'd see that exercise] definitely made a difference.

[I keep talking about] hips. Notice how I've covered [mine] up very nicely [by] standing behind the podium. There's a thing called the waist-to-hip ratio. That [ratio has an impact on] our cardiovascular risk. The exercise group [in that study] also experienced a significant decrease in hip measurements, but no change in terms of overall weight and body composition. But the bottom line is this: it's about what's going on not just in terms of the total weight, but [also] in terms of the *type* of weight [, meaning whether the weight is in the form of muscle, bone or fat].

Aerobic exercise [is good]. Resistance exercise – [working out with] resistance bands; weights – has an impact not only on muscle and bone, but also on metabolic rate, so that whatever [calories] you're taking in will actually be burned better. [Here is the criteria to use to determine whether or not you're

exercising at the appropriate intensity: you should be] sweating and breathing hard but not panting. You want to get your heart rate into a target range. [To calculate your target range, start with] 220 and subtract your age; then multiply [that number] by 70 percent [to get the low end of your range] and by 80 percent [to get the high end] ... you've got to do a little math; have somebody else do it if you don't like math. For a 50-year-old person ... [you'd subtract 50 from 220 to get] 170. Take 70 percent of that, which is [the target that] most of us would like you to [be at], and you [find that you] need to be aiming for about 120 heartbeats per minute [during exercise]. Do not [go past the high end of your target range – in this case, 136 heartbeats per minute] – because you won't [be able to exercise] as hard or as long [as you can when you're in your target range, and because that may be detrimental to your health].

[Here's an important thing to know:] One week of bed rest – and probably, at certain times during your treatment, you really weren't spending a lot of time out of bed or [out of a] chair – [has been] associated with a 4- to 5-percent loss of muscle mass in [people who are not undergoing treatment]. If you throw in some corticosteroids – prednisone or other ones – on top of that, you probably lost a significant amount of muscle mass during your treatment...

We all have to have our disclaimers. [Before you begin any exercise program,] talk with your physician or physical therapist. But, again – we have increasing amounts of data that [indicates that exercise can] be done safely without [incurring] increased risk of lymphedema. In fact, [some studies suggest that exercise may play a role in reducing or limiting lymphedema and]

bone metastases. In general, the risks are much fewer than the benefits that can come [from exercise].

The take-home point [is this:] in terms of health and weight considerations during and after diagnosis and treatment, [we need to make sure we're incorporating the basics of nutrition and exercise into our daily lives]. We can talk about all the esoteric [aspects of nutrition and exercise] but, if you don't deal with the basics, the [little things] are less important. They're all part of the whole package.

It's important to have realistic goals. I do not weigh what I did when I was 18 years old. If I [were to focus on the amount of weight I'd need to lose to get to my "ideal" weight,] that would be depressing. Instead, I'll tell myself, "I'm going to get part of the way there. You can [think about it in terms of increments of] 10 pounds or 20 pounds, but the bottom line is this: do something that actually is going to motivate you [to get to the first milestone of your journey;] then, once you get there, [focus on getting] to the next [milestone]. It's [all] about being realistic.

You need to create lifelong, life-supporting goals for you, for your spouse and for your kids. They have an impact across the board. We're also learning that survivorship is not only an issue of quantity, which is what we've looked at quite a bit; it's [also an issue of] quality. Many of the things we've talked about today [pertain to] both.

I hope you found [this talk] helpful. (Applause) Any questions?

**WOMAN:** I have two questions. The first [is about] water intake. Is drinking coffee or tea the same, or as effective

as, just straight water intake? And does that count in your 60 ounces a day? (Laughter)

**FAITH D. OTTERY, MD, PhD,**

**FACN:** Well, it depends on how [much of your water is in the form of] coffee or tea. If I had answered this two years ago I would have said, "No, it doesn't count." There's actually been a recent study that [indicates that] it probably does [count], but not ounce for ounce. If you want to have your coffee, you can [count a couple of ounces of that as part of your daily water requirement]. But how many of you have ever had a beer? (Laughter) [With alcoholic beverages,] you often put out more than you're taking in. That's really the issue. If you drink coffee and it seems [that you're urinating] a lot ... I can't drink tea because it just goes through me like you wouldn't believe.

**WOMAN:** What are your thoughts on alcohol intake [in terms of] cancer survivors and nutrition?

**FAITH D. OTTERY, MD, PhD,**

**FACN:** Which way are you hoping I answer? (Laughter)

**WOMAN:** Organic red wine; I don't know. (Laughter)

**FAITH D. OTTERY, MD, PhD,**

**FACN:** Sure. Sounds like a good idea. The nice thing about the way I look at nutrition is that it's not just [about] your breast health; it's [also about] your cardiovascular health. We know that a high intake of alcohol can put people at higher risk of developing breast cancer and a few other things. But, in general, having a glass of wine on occasion as part of your healthy lifestyle is not a problem ... and, of course, again, red wine is not the only thing. White wine [is also okay] – although I personally

would rather have red wine than white wine. But, yes, most people would say [that it's okay] as long as it's not more than [one] normal-sized glass of wine on [any given] day.

**WOMAN:** Could you talk about juicing fruits [and] vegetables?

**FAITH D. OTTERY, MD, PhD,**

**FACN:** I think it's an important issue. How many of you juice now or did when you were undergoing treatment? ... [We] in [the United States] are very good at [overdoing things] in terms of calories, but we are very bad at getting good amounts of nutrients. Only about 12 to 15 percent of people [here] are getting the minimum [number] of five servings of fruits and vegetables a day [that are recommended in order] to [ensure they're getting the necessary amounts of nutrients from those foods]. Often when people start juicing, [they find that] they've got [the recommended number of daily servings] in one cup. I think that's why people often feel so much better – they're finally taking in enough fruits and vegetables to [prevent deficiencies].

I truly think [it's a good idea for each of us to take] a multivitamin ... Some people say, "Oh, I take this oxidant and that [other thing]," but I think that, if you can get some of these things from food, it's good. Fruits and vegetables – again, the more intense the color the better, in general but, in women with breast cancer, don't throw away that fiber [supplement]. Use it for making breads; use it in meatloaf; use it in a lot of other things, because that fiber is also important.

**WOMAN:** I have a question about vitamin D. I'm on aromatase inhibitors, and I found that I had an extremely low vitamin D level, even though I live in

Miami.

**FAITH D. OTTERY, MD, PhD,**

**FACN:** And you went out in the sun occasionally?

**WOMAN:** Well, wearing SPF 45, right? So my question is, are vitamin D supplements as good as sun?

**FAITH D. OTTERY, MD, PhD,**

**FACN:** [Exposure to the sun is] an important aspect of vitamin D metabolism. Unfortunately, there are a lot of people who don't have the luxury of the sun that you have down here. I do think that ... especially in people who are having issues of adequate bone remineralization, etcetera, it's probably good to take in adequate amounts of calcium [in order to absorb] vitamin D – and, again, resistance exercise is [also] an important part of [maintaining bone health].

**WOMAN:** In a handful of us, preexisting diseases require us to have a low-fiber diet. Any recommendations for that situation?

**FAITH D. OTTERY, MD, PhD,**

**FACN:** This is why I hate giving talks. People come up with really challenging questions. (Laughter) That's the kind of situation where I think it would ... there are differences between soluble fiber and insoluble fiber ... If it goes through and it looks the same as it did when you ate it, that's insoluble fiber. The stuff that's soluble has less of an effect in terms of your GI tract and absorption of estrogen. It has more of an effect in terms of cardiovascular risk. [At any rate,] I would probably ... I assume that you have a gastroenterologist that you work with, or a dietician – I would probably see what they say.

**WOMAN:** For those of us who have had bilateral free TRAMs and do not have stomach fat – does [this lack of fat in the stomach] protect you against insulin, or is it [more a factor of one's] genetic body type?

**FAITH D. OTTERY, MD, PhD,**

**FACN:** I would love to say that, just because you don't have the abdominal fat where it was born to be, that that's going to have an impact – but if it's now in a different place, it's still belly fat. But it sure looks better up there, doesn't it? (Laughter)

**WOMAN:** Yeah. And then my other is with [inaudible] weight fluctuate; I know people who actually lost weight [inaudible] during chemo and then gained back considerable weight and [who are] now are trying to lose [it]. When you have those [kinds of] weight fluctuations – what impact does that have [on survival]?

**FAITH D. OTTERY, MD, PhD,**

**FACN:** That's a really good question, [and it's] probably on the minds of many people. I think the issue is ... the fact that, [when the person was losing weight, he or she was] probably losing a disproportionate amount of muscle, so [exercise is even more important in terms of regaining muscle, combating] fatigue and those types of issues ... [it's not as though being] 10 pounds overweight is going to be the end of you. I think the bottom line is that [we need to focus on those things that will] have the greatest impact on our cardiovascular health [as well as our] breast health – and, when we're talking about cardiovascular health, we're saying, "I'm going to be around another 30 or 40 or 50 years, and I want to think about what's happening to my heart." So it's those issues – the [things that affect us in the] long term – [that

we need to focus on;] not necessarily the little fluctuations.

**WOMAN:** I have a question about water intake. I am on Lasix to keep the fluid off my body, and I would like to eliminate that at some point in time. If I take in that much water, I'm going to struggle. Are there any thoughts about whether [or not that should be taken into consideration] or if there's a balance?

**FAITH D. OTTERY, MD, PhD,**

**FACN:** I think [that it should be taken into consideration] and that it's [an issue of] balance. You said that very nicely. I don't want to get too personal, but is it because of fluid retention ...

**WOMAN:** Yes.

**FAITH D. OTTERY, MD, PhD,**

**FACN:** If you're taking in more – sometimes you can get dehydrated if you're taking [a] diuretic. That's one of the things you're going to have to talk about with your doctor – to [find out whether or not] drinking more will help keep your system in ... I think that, when people [are told to take] a water pill – of any kind – they often think, "If I drink less, maybe I won't have to be on the pill." But, unfortunately, that's not a good [idea].

Have you ever noticed that, when you have a cold, you [might also] get a really dry throat? Or that, if you've had a lot of dry throats, all of a sudden you get a cold? Our mucus membranes from here to here need to be well hydrated. Our heart doesn't want to be dehydrated, [but] it [also] doesn't want to be overhydrated. Our kidneys absolutely have to be well hydrated. I think that, in your case, it is a challenge, [much as] the person who has to be on a low-fiber diet [is challenged to get enough fiber].

But [cutting back on your water intake] so that you're peeing less is not the right answer.

**WOMAN:** I actually lost weight during chemo – not a lot – but then I started [to gain weight]. And, despite my efforts at the gym, running or whatever, I just seemed to keep [gaining]. I came to find out that I had a very slight case of hypothyroidism, and I was put on medicine. But still nothing has changed in terms of weight loss, despite my efforts. Is it a losing battle? Or, if I work harder at the gym, am I going to [be able to get back to the weight I was at] prior to menopause and surgery and all that?

**FAITH D. OTTERY, MD, PhD, FACN:** Nothing is hopeless in terms of things like weight. I would work with [someone at your] gym, or with someone [else, who can assess and monitor your] body composition. I think it's very depressing to not see the [number on the] scale change because that's what we've all learned to look at – but [try to focus instead on] body composition. Are you gaining muscle? When you go to the gym, what kinds of exercise are you doing?

**WOMAN:** Cardio and weights.

**FAITH D. OTTERY, MD, PhD, FACN:** Weights are really important. Have you done anything, even if it's been a one- or two-time thing, with a personal trainer? Sometimes that's worthwhile – to say, “Here's what my problems are; here's what my limitations are.” You can even get a physical therapy consult; [a physical therapist can help] you [with] some of those issues also because, a lot of times, [those problems and the physical therapy] work hand in hand. The nice thing is that you're saying, “I want to do

the exercise, but I want to do it safely and [in a way that improves my] health,” and physical therapy might be a component of that. But I think [it's important to] know [where the] weight is coming from [in terms of additional body fat or muscle]. I would also look at some of the [issues we've discussed today, such as] target heart rate – are you doing those kinds of things? Sometimes exercising for a longer period of time may be more important than exercising at [a higher intensity]. [This contradicts what I just said in terms of duration of exercise versus intensity, but you might also consider trying] circuit [training, in which] you do specific exercises in intense bursts, one right after the other. But I would really talk with someone.

I rode up here, in the van from the airport, with a woman who had gained a lot of weight. Several people in the van were saying, “Oh, she's not doing anything.” Actually, she is going to a gym. She's working with someone. She's actually seen that her arms have gotten much better. Clearly, I think, what's going on with the lean tissue, or the muscle mass, is very important. If you can get that measured, [you may find the situation] less depressing. Also, think about the other things that we talked about.

**WOMAN:** And as far as the thyroid is concerned, is there anything you can do, in terms of nutrition or lifestyle, in order to get off the medicine?

**FAITH D. OTTERY, MD, PhD, FACN:** I've been on thyroid medication because I have an autoimmune thyroid disease ... called Hashimoto's disease. I've been on thyroid medication since I was in my twenties. The reality, depending on the cause of the thyroid problem, is that

you'll probably need to have your levels checked for the rest of your life. If, at some point, you want to go off [the medication,] you'll have to work with your physician to see whether or not your numbers go back down. Thyroid medication is important in terms of your cholesterol metabolism, in terms of metabolic rates, et cetera. I've kind of given up [on the idea that I might be able to stop taking the medication at some point]. I think I'm on it forever. We may have to commiserate 20 years from now in terms of that.

**WOMAN:** You mentioned remineralization and bone loss. Why do some patients have problems with remineralization? For patients that have problems with absorbing calcium – I have bone loss. I was on high-dose calcium but I was not absorbing the calcium, and I still developed bone loss. Then I was put on a high-dose vitamin D. Now I'm being tested to see if the vitamin D has any effect on the calcium absorption.

**FAITH D. OTTERY, MD, PhD, FACN:** Are you on a bisphosphonate?

**WOMAN:** I'm on tamoxifen and Zoladex.

**FAITH D. OTTERY, MD, PhD, FACN:** Then I think the best thing for you ... is probably going to be resistance exercise: weights, exercise bands, et cetera. What's interesting is that – people ask, “If I'm doing arm exercises using the exercise bands, does that have any effect on the rest of my body?” Yes, it actually does. It does have a systemic effect. The more inactivity ... remember when I said that one week [of being confined to a] bed or a chair resulted in a 4- to 5-percent loss of muscle mass in volunteers [who did not have any health issues]? Exactly

the same thing happens to bone, so the more inactive ... walking does help. But, again, resistance exercise is probably the thing that's most important in terms of ... since you're doing all the other things, it's probably [an issue of] making sure that you're getting resistance exercise.

There was a study in geriatrics a number of years ago that looked at calcium and vitamin D versus exercise in terms of risk of hip fracture in elderly men and women. The exercise group actually did better than the group that was getting ... [the findings don't] mean [to indicate that] you should quit taking those, but vitamin D and calcium intake is not the end all and be all. Clearly the exercise component is really important. If you're not doing resistance exercise, I would definitely suggest that you do that.

**WOMAN:** But what about patients who are doing that? I exercise every day. I do cardio and weights. I've been doing it since I was 16, every day, and I'm still getting bone loss.

**FAITH D. OTTERY, MD, PhD, FACN:** Your family history – is there osteoporosis in your family, or has nobody ever [been tested for] bone density, so they don't know?

**WOMAN:** That's more like it. (Laughter)

**FAITH D. OTTERY, MD, PhD, FACN:** I would suggest that [it might be a good idea for] some of the other women in your family get their bone density checked. That may be just part of your genetic makeup. But I [also might] talk to ... I'm sure you're tired of talking to different kinds of doctors, but sometimes an endocrinologist may be able to help you in terms of

understanding whether or not there's anything else that can be done to potentially help that, or [in terms of assessing] the dosing or the type of treatment that you're getting.

**WOMAN:** It's my endocrinologist who recommended the vitamin D. (Laughs)

**FAITH D. OTTERY, MD, PhD, FACN:** I would agree with that. If it's still not working, have you asked him about your other options?

**WOMAN:** They were thinking about Zometa. I researched it, and it does not sound like something I want to be on.

**FAITH D. OTTERY, MD, PhD, FACN:** Well, there's always a thing called a second opinion with another endocrinologist.

**WOMAN:** (Laughs) Okay, thank you.

**WOMAN:** The Adriamycin that, probably, most of us took – we all know about the heart problem, but I never really put it together – that your heart's a muscle – and you're never told [whether or not] it could affect the rest of your muscles. Is that something that happens or not?

**FAITH D. OTTERY, MD, PhD, FACN:** It's never really been studied, [as far as] I'm aware ... The reality is that the types of muscle ... notice that the heart muscle and the skeletal muscle looked very different under the microscope. They are very different kinds of muscle. The heart has to be pumping constantly. It's not like [it can stop working when] I go to bed; it has to be working all the time. It's a different kind of muscle. It responds to different things. It has different effects in terms of there are people who have

looked at CoQ10 as having an effect in terms of [the heart muscle] I always felt that breast cancer in women who are premenopausal and breast cancer in women who are postmenopausal are really kind of two different diseases. They both live in the breast and they may look similar under the microscope, but they act differently. I think it's the same kind of thing —that Adriamycin probably has more of an effect on the [heart] muscle because it's a different kind [of muscle].

**WOMAN:** For me, it all goes together. I'd rather blame my body issues on things I had to do, [such as having to take] Adriamycin. But the whole Decadron thing and [the issue of] taking steroids – I know they're awesome; they help so much – but is there anything down the line that [makes those benefits not worth taking it?] I guess I feel as if the Decadron had lasting effects on my body. I guess I saw the most change when I was taking that. And I've never gotten back. And I'd rather blame it on something [other] than [lack of] exercise. (Laughter) I'm going to start exercising.

**FAITH D. OTTERY, MD, PhD, FACN:** What's interesting is ... the antiemetic, or antinausea, medications that we have are so different than [they were] when I was ... the first time I was dealing with chemotherapy as a clinician was as a med student. If [someone experienced] really, really bad [side effects because of] chemotherapy, we just snowed [him or her] for three days and [the patient] slept for three days. We didn't have most of the things that we now have. Management of nausea and vomiting is clearly much better than it was 10 years ago; 15 years ago.

Honestly, your question is a very good one because I think that most people

don't think that a little bit of Decadron or prednisone given during the time of treatment is really a big deal.

**WOMAN:** But it is. (Laughs)

**FAITH D. OTTERY, MD, PhD,**

**FACN:** But it is. Exactly. Maybe it's [an issue] that [will grow in importance, thanks to] an organization like this that addresses it. But that is the kind of thing that has to be studied because it not only has an impact in terms of muscle mass, but it also has an effect on bone and risk of osteoporosis. I think it's not a benign medication.

**WOMAN:** Girls who have advanced breast cancer – you see them having to take steroids all the time. You talked about your weight before. You look in the mirror, and I know they look in the mirror, and that's just a constant reminder, and that's something that they're always going to have to take and they're always going to look like that. But it's not [because of] the cancer, necessarily; it's [because of] the steroids and the ... I don't know. I guess I'm just anti-steroid, but ...

**FAITH D. OTTERY, MD, PhD,**

**FACN:** It's [frustrating to know] that we don't have all the answers...

[END OF TRANSCRIPT]