Over 13 million cancer survivors are living in the United States today according to recent American Cancer Society estimates (Siegel et al., 2012). As treatment options improve and the population ages, the number of cancer survivors is expected to increase to 18 million by 2022 (Siegel et al., 2012). As a result, the need to address cancer survivor issues becomes vitally important. Cancer survivors face numerous physical, psychological, social, and financial challenges throughout the cancer experience. Moreover, these issues vary as needs change from diagnosis to treatment to cure or death. The health benefits of exercise are widely accepted. Recognizing these benefits, the Department of Health and Human Services published the first-ever, Physical Activity Guidelines for Americans (http://www.health.gov/paguidelines/). Concurrently, interest in the health benefits of exercise among cancer patients has intensified with over 80 randomized clinical trials published (Speck, Cournaya, Masse, Duval, & Schmitz, 2010). Even with this ever-expanding knowledge base of exercise interventions in people with cancer, numerous questions, such as comparative effects of various exercise modalities on important patient outcomes remain.

High dose chemotherapy with or without total body irradiation followed by hematopoietic stem cell transplantation (HSCT) is a curative treatment for various hematologic malignancies, (Hahn et al., 2006; Hahn et al., 2003; Hahn et al., 2001; Oliansky et al., 2009; Oliansky et al., 2008; Rowe et al., 1994). The treatment is not without risks as it is associated with high 100-day treatment-related mortality (up to 26%) (Pasquini & Wang, 2009) and highly distressing complications (Bevans, Mitchell, & Marden, 2008; Pallera & Schwartzberg, 2004). These complications include graft versus host disease (GVHD), serious infections, and other associated problems. Hematopoietic stem cell transplant patients experience a wide range of symptoms, such as fatigue and sleep disturbances (Hacker et al., 2006; Rischer, Scherwath, Zander, Koch, & Schulz-Kindermann, 2009). The symptom profile of HSCT patients varies depending on the stage of recovery (Andersson, Ahlberg, Stockelberg, Brune, & Persson, 2009; Andrykowski et al., 1990; Hacker & Ferrans, 2003). For example, those in the early stages of recovery are more likely to experience symptoms associated with the high-dose chemotherapy and/or other
early onset medical problems. The symptom experience of long-term survivors may be different and related to chronic GVHD among other late onset complications. Regardless of the timing of onset, these symptoms frequently lead to issues with functional abilities, and ultimately, may result in diminished quality of life. It is critically important to address cancer survivorship issues in HSCT recipients as over 50,000 transplants are performed world-wide each year and the numbers continue to rise (Pasquini & Wang, 2009). Exercise is one non-pharmacologic intervention that potentially reduces the symptom burden while improving functional status across the cancer trajectory. The purpose of this paper is to review various types of exercise modalities and discuss potential application issues in the HSCT population.

Physical Activity

Interest in exercise interventions for HSCT recipients has grown substantially over the past decade as a means to mitigate physical and psychological problems associated with cancer and cancer treatment (Wiskemann & Huber, 2008). Compared to other cancer populations, however, HSCT recipients represent an under-studied group even though they may be one of the neediest due to the toxic effects of the treatment. In order to appreciate the benefits of exercise, however, an understanding of the difference between physical activity and exercise is needed.

The words, physical activity and exercise, are frequently interchanged in the lay as well as healthcare literature. While this is understandable given the similarities, there are important differences to note when reviewing research findings. Physical activity applies to all body movements that occur in response to skeletal muscle contraction and results in energy expenditure (Whaley, Brubacker, & Otto, 2006). Exercise, on the other hand, is a specific type of physical activity consisting of structured, repetitive body movements executed to improve and/or maintain physical fitness (Whaley et al., 2006). All bodily movements from taking a deep breath to combing hair, walking the dog, or cleaning the house require skeletal muscle contraction and result in energy expenditure; thus, are classified as physical activity. These types of activities are defined as free living physical activity or activities that occur within the confines of daily living.

Those who engage in low levels of physical activity or live a sedentary lifestyle, including cancer survivors, are at risk for cardiovascular disease, diabetes, obesity among other conditions (Allender, Foster, Scarborough, & Rayner, 2007). Current public health recommendations to promote and maintain health include moderate-intensity aerobic physical activity for a minimum of 30 minutes, five days a week or vigorous-intensity aerobic physical activity for a minimum of 20 minutes, three days per week (Haskell et al., 2007). Unfortunately, most people, including people with cancer, are not active enough at levels needed to promote health (“Prevalence of physical activity, including lifestyle activities among adults–United States, 2000-2001,” 2003). Even when people engage in the minimum recommended levels of physical activity, there is still concern that those who spend the rest of their day engaged in sedentary behavior may still be at risk for health consequences related to physical inactivity (Hamilton, Hamilton, & Zderic, 2007). This suggests that there is a balanced need for moderate or vigorous physical activity most days of the week in addition to increasing physical activity throughout the rest of the day.

Hematopoietic stem cell transplant recipients are at increased risk for low levels of physical activity, particularly while hospitalized, immediately following the transplant and during the transition from hospital to home. Our group was the first to objectively document significant reductions in physical activity following HSCT using wrist actigraphy (Hacker et al., 2006). A wrist actigraph is a device that monitors the occurrence and degree of motion using a piezoelectric sensor. The motion sensor integrates the degree and speed of motion to produce an electrical current that varies in magnitude so that an increase in the degree of motion and speed produces an increase in voltage. This information is stored onboard in the wrist actigraph’s memory as activity counts. In our work, we used the Actiwatch-Score® as the device is sensitive to motion in all directions. In this study, we found a 58% overall reduction in physical activity (Figure 1). While these finding were expected, the magnitude and pattern of change in physical activity while the stem cell transplant patient was hospitalized was surprising. In addition, the expected rest and physical activity patterns were not well-defined, with patients experiencing more activity at night and less activity during the day (Figure 2). To our knowledge, no other studies have objectively examined free-living physical activity in HSCT. Multiple studies have examined moderate or vigorous aerobic physical activity interventions. Importantly, there is a need to determine if participation in a structured physical activity program, such as aerobic or strength training results in increased physical activity throughout the rest of the day.
Exercise

As stated above, exercise is a specific type of physical activity consisting of structured, repetitive body movements executed to improve and/or maintain physical fitness (Whaley et al., 2006). There are many types of exercise modalities and the list is growing on a regular basis. The most common types are aerobic exercise, strength training or resistance training, and flexibility training. Other exercise programs include yoga, pilates, and organized sports, such as baseball. Identifying the desired health outcomes prior to embarking on an exercise program is very important as different types of exercise programs result in different outcomes. Desired health outcomes might include improving cardiorespiratory fitness, flexibility, and body composition, restoring and maintaining muscular strength and/or endurance, weight loss, alleviating symptoms such as fatigue, and/or some combination of the above.

A number of exercise interventions studies have been conducted in the HSCT group. Table 1 lists these exercise interventions studies. The following is a brief summary. In the published exercise intervention trials involving HSCT recipients, aerobic exercise was the most common exercise modality tested. Almost all of the exercise interventions contained an aerobic exercise component used alone or in combination with strength training. The samples in these studies were generally small containing fewer than 100 patients. Only two studies included more than 100 subjects. That being said, HSCT is a relatively uncommon treatment; so, the ability to accrue subjects into an exercise study, whether the intervention is aerobic training, strength training, or a combination of the two, is relatively limited. All of the studies listed in Table 1 were single-center studies. This reflects the exclusivity of this intensive cancer treatment as stem cell transplantation is not offered at all health care facilities. Some institutions may consider this to be a high-risk, low-volume procedure that requires specific, dedicated personnel to provide quality care. For example, a number of major academic medical centers and acute care facilities offer HSCT in Chicago while many others do not. Importantly, people in the metropolitan Chicago area have a choice of institutions because of the geographic proximity. Likewise, geographic proximity is beneficial for researchers and clinicians wishing to collaborate on an exercise intervention study. In some states, allogeneic HSCT may only be offered in one or two institutions across the entire state.

The types of HSCT subjects included in the exercise studies varied with some studies only enrolling allogeneic patients, others autologous patients and still others enrolling both autologous and allogeneic transplant patients. In general, allogeneic HSCT patients are at increased risk for morbidity and mortality (Copelan, 2006). One important benefit of only enrolling one type of transplant patient (e.g., allogeneic versus autologous) is the ability to control confounding factors such as acuity of illness. By doing this, investigators improve the likelihood of finding a training effect if one exists. Conversely, those studies with greater subject variability, as would be the case when both autologous and allogeneic transplant patients are enrolled, strengthen the generalizability of the findings assuming that a significant training effect is found and other aspects of the study are well-controlled.

In the HSCT literature, there was a mix of randomized controlled trials and quasi-experimental studies. While a randomized controlled trial is considered to be a stronger design, exercise studies can be very costly as well as labor- and time-intensive. For this reason, it is imperative that pilot work be carried out prior to implementing a large scale study. It is not surprising that several of these studies were pilot studies. Publishing pilot exercise study work is necessary for disseminating the lessons learned so that other researchers may benefit, thereby advancing our scientific knowledge. The movement toward randomized clinical trial designs illustrates the growing maturity of exercise interventions in HSCT recipients. Even so, a gap in the literature remains as there is a need to compare exercise interventions to attention control groups in randomized clinical trials. Most studies compared the exercise intervention to usual care and did not control for the attention that subjects in an exercise intervention arm typically receive.

In our next study, we plan to compare our exercise intervention to an attention control arm. The timing of enrollment varied some what among the HSCT studies although the
<table>
<thead>
<tr>
<th>Investigators</th>
<th>Sample^</th>
<th>Design</th>
<th>Exercise Intervention</th>
<th>Timing of Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Baumann, Kraut, Schule, Bloch, &amp; Fauser, 2010)</td>
<td>N=64 Allogeneic and autologous</td>
<td>*RCT</td>
<td>Aerobic</td>
<td>Acute recovery</td>
</tr>
<tr>
<td>(Carlson et al., 2006)</td>
<td>N=12 Allogeneic</td>
<td>*QE</td>
<td>Aerobic</td>
<td>Long-term recovery</td>
</tr>
<tr>
<td>(Coleman et al., 2003)</td>
<td>N=24 Autologous</td>
<td>RCT</td>
<td>Stretching, Aerobic &amp; Strength Training</td>
<td>Acute Recovery</td>
</tr>
<tr>
<td>(Coleman et al., 2008)</td>
<td>N=135 Autologous</td>
<td>RCT</td>
<td>Stretching, Aerobic &amp; Strength Training</td>
<td>Acute Recovery</td>
</tr>
<tr>
<td>(Cunningham et al., 1986)</td>
<td>N=40 Allogeneic</td>
<td>RCT</td>
<td>Strength Training</td>
<td>Acute Recovery</td>
</tr>
<tr>
<td>(F. Dimeo, Tilmann et al., 1997)</td>
<td>N=36 Autologous</td>
<td>QE</td>
<td>Aerobic</td>
<td>Acute Recovery</td>
</tr>
<tr>
<td>(F. Dimeo, Fetscher et al., 1997)</td>
<td>N=70 Autologous</td>
<td>RCT</td>
<td>Aerobic</td>
<td>Acute Recovery</td>
</tr>
<tr>
<td>(F. Dimeo et al., 1996)</td>
<td>N=20 Allogeneic and autologous</td>
<td>QE</td>
<td>Aerobic</td>
<td>Acute Recovery</td>
</tr>
<tr>
<td>(E. D. Hacker, Larson, Kujath et al., 2011)</td>
<td>N=19 Allogeneic and autologous</td>
<td>RCT</td>
<td>Strength Training</td>
<td>Acute Recovery</td>
</tr>
<tr>
<td>(S. C. Hayes et al., 2004; S. Hayes et al., 2003; S. Hayes et al., 2004)</td>
<td>N=12 Autologous</td>
<td>QE</td>
<td>Aerobic and Strength Training</td>
<td>Acute Recovery</td>
</tr>
<tr>
<td>(Inoue et al., 2010)</td>
<td>N=26 Allogeneic</td>
<td>QE</td>
<td>Aerobic and Strength Training</td>
<td>Acute Recovery</td>
</tr>
<tr>
<td>(Jarden et al., 2009)</td>
<td>N=42 Allogeneic</td>
<td>RCT</td>
<td>Aerobic and Strength Training</td>
<td>Acute Recovery</td>
</tr>
<tr>
<td>(Kim &amp; Kim, 2006)</td>
<td>N=42 Allogeneic</td>
<td>RCT</td>
<td>Strength training</td>
<td>Acute Recovery</td>
</tr>
<tr>
<td>(Knols et al., 2010)</td>
<td>N=131 Allogeneic and autologous</td>
<td>RCT</td>
<td>Aerobic and Strength Training</td>
<td>Acute Recovery</td>
</tr>
<tr>
<td>(Mello, Tanaka, &amp; Dulley, 2003)</td>
<td>N=32 Allogeneic</td>
<td>RCT</td>
<td>Aerobic and Strength Training</td>
<td>Acute Recovery</td>
</tr>
<tr>
<td>(Shelton et al., 2009)</td>
<td>N=61 Allogeneic</td>
<td>RCT</td>
<td>Aerobic and Strength Training</td>
<td>Acute Recovery</td>
</tr>
<tr>
<td>(Wilson et al., 2005)</td>
<td>N=17 Allogeneic and autologous</td>
<td>QE</td>
<td>Aerobic</td>
<td>Acute and Long-term Recovery</td>
</tr>
<tr>
<td>(Wiskemann et al., 2011)</td>
<td>N=105</td>
<td>RCT</td>
<td>Aerobic and Strength Training</td>
<td>Acute Recovery</td>
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</tbody>
</table>

Note: Acute recovery denotes within the first year following HSCT. Long-term recovery denotes more than one year post HSCT.

^Sample size indicates number enrolled. The number of subjects that complete the program may be different.

*RCT: randomized controlled trial

*QE: quasi-experimental
vast majority of exercise studies enrolled subjects during the acute recovery period, defined here as during the first year following the transplant. Subjects were most commonly enrolled during or immediately following discharge from the hospital for HSCT. The need to address physical deconditioning at this treatment juncture is consistent with self-reports of patients noting diminished functional ability immediately following the transplant.

Aerobic Exercise

While there are some cross-benefits to the various types of exercise modalities, certain modalities are more likely to produce specific benefits. If the desired health outcome is improving cardiorespiratory fitness or weight loss, aerobic exercise is more likely to produce these results. Aerobic exercise promotes cardiorespiratory fitness by using the large muscle groups in a continuous, rhythmic fashion (“American College of Sports Medicine Position Stand. The recommended quantity and quality of exercise for developing and maintaining cardiorespiratory and muscular fitness, and flexibility in healthy adults,” 1998). This type of exercise requires the heart and lungs to work harder than while resting. There are a wide range of aerobic exercises, such as jogging, bicycling, swimming, etc. Other examples are listed in Table 2. Aerobic exercise is also used to enhance weight loss. This is important for cancer survivors who struggle with obesity. When energy expenditure is increased beyond the minimum expectations (generally considered to be moderate-intensity aerobic activity 30 minutes a day, five days a week or vigorous-intensity aerobic activity for a minimum of 20 minutes a day, three days per week) (Haskell et al., 2007), the likelihood of losing weight increases, particularly if increased physical activity is coupled with diet restriction. Thus, the ACSM recommends between 150-250 minutes of moderate intensity physical activity per week in conjunction with moderate diet restriction for weight loss (Donnelly et al., 2009). For obvious reasons, cancer survivors should check with their health care provider prior to beginning an exercise or weight loss program.

Initiating aerobic exercise programs in people with cancer presents unique challenges. Recognizing this, the ACSM developed specific guidelines to use in people with cancer (Schmitz et al., 2010). The ASCM guidelines include recommendations for pre-exercise medical assessments, exercise testing, and exercise prescription. In addition, these guidelines include a review of the current evidence-base for exercise, including recommendations for HSCT recipients. A review of all of the findings related to exercise in people with cancer is beyond the scope of this paper. The reader is referred to the ACSM’s website to access this and other pertinent guidelines and positions (http://www.acsm.org). Importantly, the evidence base for implementing an exercise program in people with cancer is growing and HSCT is no exception (Wiskemann & Huber, 2008).

Although the evidence base for aerobic exercise suggests a positive effect (Wiskemann & Huber, 2008), the kind of benefit typically obtained in the HSCT population might be slightly different than the benefit found in other cancer populations. For example, when evaluating treatment effects in aerobic exercise intervention studies, one would expect to see improvements in aerobic capacity or functional status in the aerobic exercise arm compared to the non-exercising arm. This may be somewhat different than what is seen in the transplant population, particularly when conducting an aerobic exercise trial immediately following the transplant. In this case, one may actually see stabilization of aerobic capacity or functional status in the aerobic exercise arm with significant declines in the non-exercising comparison group. In studies finding results such as these, the stabilization or maintenance of aerobic capacity is viewed as beneficial especially when compared to diminished aerobic capacity or functional status in the non-exercising comparison arm of the study.

Consistent with studies involving other cancer populations, a wide range of benefits following aerobic exercise has been documented in HSCT recipients. These positive effects include diminished or reductions in fatigue, (Carlson, Smith, Russell, Fibich, & Whitaker, 2006; Coleman et al., 2003; Dimeo, Stieglitz, Novelli-Fischer, Fetscher, & Keul, 1999; Knols et al., 2010; Wilson, Jacobsen, & Fields, 2005) fat-free mass, (S. Hayes, Davies, Parker, & Bashford, 2003) improved functional performance, (DeFor, Burns, Gold, & Weisdorf, 2007; Dimeo et al., 1996; Dimeo, Fetscher, Lange, Mertelsmann, & Keul, 1997; Jarden, Baadsgaard, Hovgaard, Boesen, & Adamsen, 2009; Sheldon et al., 2009) improvements in perceived physical and emotional health status, (DeFor et al., 2007; Dimeo et al., 1999) improved aerobic capacity, (Carlson et al., 2006; F. Dimeo et al., 1996; Dimeo et al., 2003; Haddy, Mosher, & Reaman, 2001; Hayes, Davies, Parker, Bashford, & Green, 2004) and better quality of life (Hayes, Davies, Parker, Bashford, & Newman, 2004; Wilson et al., 2005). To date, these aerobic exercise programs have been safely implemented without reports of injury. Even so, any aerobic exercise program implemented in HSCT patients, especially those of moderate or vigorous intensity, must be continuously

Table 2 Examples of Aerobic Exercise

<table>
<thead>
<tr>
<th>Aerobic Exercises</th>
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<tbody>
<tr>
<td>Bicycling</td>
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<tr>
<td>Cross-country skiing</td>
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</tr>
<tr>
<td>Dancing</td>
<td></td>
</tr>
<tr>
<td>Hiking</td>
<td></td>
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<tr>
<td>Roller Skating</td>
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<tr>
<td>Rowing</td>
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<tr>
<td>Running</td>
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<tr>
<td>Sprinting</td>
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<tr>
<td>Swimming</td>
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<tr>
<td>Walking</td>
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<tr>
<td>Water Aerobics</td>
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</table>
monitored for an adverse or unanticipated event. There is a small but significant risk of an adverse cardiovascular event when performing any aerobic activity. These risks include myocardial infarction and even death. Prior to embarking on any type of exercise program, it is highly recommended that the ACSM’s guidelines for exercise testing and prescription in general and specifically for cancer patients be followed (American College of Sports Medicine, 2010; Schmitz et al., 2010a). For an in-depth review of the findings from exercise intervention studies involving HSCT, the reader is referred to the Wiskemann and Huber review article (Wiskemann & Huber, 2008).

**Strength Training**

Strength training is another type of exercise modality that has been tested in HSCT patients. In the HSCT literature, strength training is rarely used alone and often is used in conjunction with aerobic training. Strength training compared to aerobic exercise more effectively builds muscle mass. In the HSCT population, maintaining or building muscle mass may be vitally important to combat the potential loss of muscle mass associated with prolonged physical activity. This loss of muscle mass translates into decreased muscle strength and ultimately may result in long-term physical deconditioning (Figure 3). Recognizing this, the ACSM noted in the guidelines for exercise in cancer patients that strength training may be more important than aerobic training in the unique population (Schmitz et al., 2010). When strength training is combined with aerobic exercises, however, it is difficult to disentangle the individual effects of aerobic exercise compared to strength training. Our group has conducted two of the three single-modality strength training studies in HSCT patients published in the literature. These are briefly summarized below.

Our initial study established the feasibility and acceptability of our strength training intervention in HSCT patients. (Hacker, Larson, & Peace, 2011) This one-group, prospective, repeated measures study enrolled 10 subjects who received high-dose chemotherapy followed by HSCT. Using elastic resistance bands, subjects participated in a comprehensive program of progressive resistance to strengthen the upper body, lower body and abdominal muscles. Moderate-intensity training began following hospital discharge and continued for six weeks (3 sessions per week). Two major revisions to the strength training intervention occurred: (1) changing the strength training program from an unsupervised, home-based program to a combination supervised/unsupervised program with weekly clinic visits and (2) allowing patients who were not strong enough to use elastic resistance bands for strength training to participate by performing the exercises (concentric/eccentric contractions of muscles) without bands.

This study was originally designed to be home-based. We found that early subjects required more frequent, in-person, follow-up to adjust the exercise prescription. This necessitated a change to a combination supervised/unsupervised approach. Subjects experienced difficulty performing all of the exercises when initially discharged from the hospital. As their health status improved, subjects increased the number of exercises performed in a single session. Exercising under supervision weekly helped facilitate progression. All subjects who used the bands reported that the bands were easy to use. Subjects reported that most of the exercises were acceptable and within their capabilities even if they were not able to perform all of the exercises at once. Although the strength training intervention was more time- and labor-intensive than originally planned, eight of the ten subjects were exercising 2-3 times per week by week 6 suggesting that the tailored approach enhanced feasibility and acceptability.

The second pilot study used a two-group, randomized block, repeated measures design to test the effects of a strength training intervention compared to usual activity in people receiving high dose chemotherapy and HSCT. Nineteen subjects were randomly assigned to the strength training (n = 9) or usual care (n = 10), stratified by type of transplant: allogeneic or autologous (Hacker, Larson, Kujath et al., 2011). Feasibility was again evaluated by determining the week-to-week strength training frequency of study participants. By week 2, all subjects in the strength training group exercised at least 1-2 times per week. By week 3, all subjects met the strength training prescription of exercising 3 times per week, demonstrating feasibility. All of the subjects exercised at least 1-2 times per week for at least 5 of the 6 weeks. Physical activity, fatigue, muscle strength, and quality of life were evaluated for time, group, and group x time interaction effects. As expected, significant changes in physical activity, fatigue, muscle strength and quality of life occurred over time for all subjects. One group effect was noted, with subjects in the exercise group reporting less fatigue than subjects in the control group. The group effect for physical activity approached significance with increased levels of physical activity in the strength training group compared to the usual care group. Subjects in the strength training group experienced a 47% reduction in physical activity baseline to pre-engraftment compared to only 41% in the usual care group. Following the strength training intervention, physical activity increased by 116% in the strength training group compared to only 88% in the usual care group. No significant interaction effects were detected for any dependent variables.

**Figure 3. Model of Negative Cycle of Disability**
however, physical activity (group x time) approached significance.

Our group recently received a Research Scholar Grant from the American Cancer Society to continue this line of research (E. Hacker, Principal Investigator: Strength Training to Enhance Early Recovery after Stem Cell Transplantation). This single-blind randomized controlled trial will compare the efficacy of our strength training intervention to usual care plus attention control with health education following high dose chemotherapy and HSCT. We plan to enroll 74 subjects who will be randomly assigned to one of two groups (strength training compared to an attention control group with health education). Our primary outcomes (physical activity, fatigue, muscle strength, functional ability, quality of life and frailty) will be measured three times: (1) prior to HSCT - baseline; (2) eight days following HSCT - after stem cell infusion but pre-engraftment; and (3) six weeks following hospital discharge. While both groups are expected to recover, we hypothesize that the strength training intervention will enhance recovery from baseline and pre-engraftment to six weeks post hospital discharge.

Challenges Related to Attrition and Adherence in Exercise Studies

Finally, subject retention and adherence to the exercise intervention is a challenge for all studies involving people with cancer, including HSCT patients. Exercise studies may be expensive to implement, especially if specialized equipment (such as treadmills or metabolic carts) is needed and/or supervision is required for exercise testing and/or monitoring the cancer patients’ exercise performance. Because of the time, cost, and personnel needs associated with testing an exercise intervention in a research setting, minimizing subject drop out (subject attrition) while maximizing exercise adherence is an important goal.

Subject attrition is always a concern for cancer researchers and is particularly concerning to researchers interested in testing an exercise intervention in HSCT recipients. Examining the reasons for leaving a study helps researchers and clinicians determine the feasibility and acceptability of an exercise intervention. When reasons for subject attrition are not provided in exercise studies, the reader is essentially left to their own devices for conjuring up a reason. Was the exercise intervention too difficult for the subjects? Was the subject burden too much if subjects were required to attend a set number of supervised exercise sessions per week? Were the subjects too ill to participate in the exercise program? These questions can easily be answered by including this information in the published report allowing researcher and clinicians the opportunity to judge the evidence base in a comprehensive manner.

While patient attrition rates information provides readers with specifics regarding patients who fail to complete research activities, information regarding adherence to the exercise program is also needed for researchers planning additional studies and/or clinicians considering implementation of an exercise program in the clinical setting. For instance, researchers and clinicians need to know how much exercise is needed to sustain a specified effect. What exercise prescription yields the most benefit and results in the greatest adherence? What is considered to be an acceptable adherence rate? Should the same standard for adherence rates exist for supervised versus unsupervised programs? High-intensity compared to mild-intensity? It is vital that oncology researchers and clinicians consider exercise adherence as even the best design exercise program will fail if adherence to the program is jeopardized.

Conclusion

Exercise has been identified as an effective intervention to mitigate physical and psychological problems associated with cancer and cancer treatment. Hematopoietic stem cell transplant recipients represent an understudied group even though they may be one of the neediest, in terms of physical deconditioning following cancer treatment. Pragmatic considerations influence the choice of exercise modality in the first six weeks after hospital discharge following HSCT. The goals of the exercise program drive the choice of exercise modality. Adherence to the exercise program is an important consideration.

REFERENCES


Dear CCONS members,

This is my last president’s message. It has been my pleasure to serve as CCONS president the past two years. I want to thank you all for your support and assistance. I especially want to thank the board members, committee chairs and committee members who work so hard to keep CCONS running. They have made CCONS one of the best chapters in ONS. I think we have grown as an organization and as a board during these past two years through the hard work of our leadership team.

We have many fine traditions in CCONS. Tradition is a ritual or belief passed down within a society that is maintained in the present but has strong ties to the past. This is often a good thing as it instills positivity and a sense of belonging. However, tradition can have a down side as it sometimes impedes progress. The “we’ve always done it this way” is great as long as we aren’t closing ourselves to the possibility of new and better ways with change. In order to be viable as an organization, CCONS needs to continue to grow and evolve to meet the needs of our membership.

Christa Lappin, our new CCONS president, has some great ideas to do just that. So while up-holding traditions is a way to honor the legacies of the past, we must not be afraid to look at different paths in the years ahead. I hope you will listen to her ideas and give her your support as she works to serve the needs of our members.

Sincerely,

Dani Gale
CCONS President
2010-2012
Engaging in cardiac rehabilitation is a well-established tenet of the recovery of patients who have experienced a cardiac event or cardiac surgery.

For the oncology patient population, when we think rehabilitation, we may picture post-mastectomy exercises, but may not envision the incorporation of physical activity as part of the overall plan for patients with a wide range of cancer diagnoses. Based on recent and ongoing science, as well as on the emerging recognition of the need for survivorship care, our recommendations about exercise warrant a closer look.

A growing body of evidence points to the benefits of well-designed exercise programs in comprehensive oncology patient care. Hacker’s lead article, as an example, shares an important contribution to the evidence base for exercise in the care of the patient undergoing hematopoietic stem cell transplant.

Many oncology professionals might be surprised to learn that there is a specialty certification for fitness professionals offered by the American College of Sports Medicine (ACSM) in partnership with the American Cancer Society—the ACSM/ACS Certified Cancer Exercise Trainer (CET).

Elline Eliasoff, a Clinical Exercise Specialist (ACSM), Cancer Exercise Trainer (ACSM/ACS), registered kinesiologist and massage therapist, completed the CET program during the pilot study of the training. Her experience, however, indicates that very few oncologists or oncology nurses are aware of this particular expertise among fitness professionals.

“I have knocked on doors and tried to educate doctors and nurses and they rarely get excited….I get no referrals from oncologists,” she wrote in an email. Most referrals to Eliasoff for cancer exercise training come from word of mouth; but she also receives referrals from internists, chiropractors and survivorship programs.

This lack of awareness has left her frustrated. As she noted, “Exercise is an amazing modality with no side effects. It can help a person metabolize drugs quicker, attenuate side effects, decrease nausea, decrease depression, increase self esteem, decrease fatigue (highly counterintuitive), empower the patient and overall enhance quality of life. People feel better, look better, and enjoy a better quality of life. It is criminally under-prescribed.”

In her practice, Eliasoff tailors her activity recommendations to the fitness level of the client. “For instance,” she explained, “a sedentary, obese (BMI 30 or more) 70-year-old diagnosed with breast cancer will be given different recommendations than the 30-year-old marathon runner with the same diagnosis.” Her goals include keeping the client active, helping to minimize side effects, encouraging good nutrition and hydration.

During treatment, she has found that some clients find relief from fatigue and depression through exercise, and she strives to create a balanced approach designed to encourage a comfortable and restorative level of activity. For those who have completed treatment, the emphasis shifts to regaining strength and stamina, with a focus on developing core strength, cardiovascular endurance, muscular strength, flexibility, with an eye toward monitoring for untoward cardiac or bone health issues.

“I focus a lot on balance and coordination since neuropathy often adversely affects balance. In survivorship, we focus on the basic principles of fitness: cardio, muscle strength, flexibility, and balance. Plus if there is recurrence, a strong body will tolerate treatment better,” she noted.

Recent analyses of exercise-related studies suggests that exercise can have a positive effect on health-related quality of life (HRQoL) in general and on common quality of life issues, such as pain, fatigue, anxiety and sleep disturbance, and warrants a closer look. The Cochrane Review, acknowledged as a mainstay of evidence-based health care, analyzed the evidence related to the impact of exercise on aspects of health-related quality of life in adults receiving active treatment. Reviewers examined the results of over fifty trials including nearly 5,000 participants who engaged in walking, yoga, strength training, resistance training, cycling, yoga or Qigong while in some aspect of active treatment, finding that overall there was a positive influence on HRQoL (Mishra, Scherer, Snyder, et al. 2012). A companion review of exercise in cancer survivors who had completed treatment, encompassing 40 trials and nearly 3700 participants randomized to exercise or comparison groups, reported similar positive effects on HRQoL and body image, emotional well-being, sexuality, social functioning, anxiety, fatigue and pain (Mishra, Scherer, Geigle, et al., 2012).

In 2009, the American College of Sports Medicine, Siteman Cancer Center at Barnes-Jewish Hospital, Wash-
Physical activity yourself. Stop this screen-based activity now, and give me twenty! Or at least go for a walk.

**REFERENCES**

**American Cancer Society**

Physical Activity and the Cancer Patient

Review patient-oriented recommendations about exercise from the American Cancer Society here.


**American College of Sports Medicine**

Learn more about the American College of Sports Medicine/American Cancer Society Certified Exercise Trainer Program, including how to find a certified CET.

http://certification.acsm.org/acsm-certified-clinical-exercise-specialist

Tools from the program and its “Exercise is Medicine” program are listed below. These are provided as educational information only and are not intended for individual patients.


Exercise Prescription and Referral Form


http://www.livestrong.org/What-We-Do/Our-Actions/Programs-Partnerships/LIVESTRONG-at-the-YMCA

Gilda’s Club also offers similar programming.

LIVESTRONG at the YMCA is a survivorship program designed to help patients transition from active treatment to a healthy post-treatment lifestyle. Local offerings of the program appear to be limited, so contact LIVESTRONG or your area YMCA about scheduling and availability.

http://cancerhealthalliance.com/about.htm

The Cancer Health Alliance partners, including Wellness Place, Cancer Wellness Center, Wellness House, the Cancer Support Center, the Living Well Cancer Resource Center, all offer a variety of physical activity and exercise programs, such as light aerobics, yoga, Qi Jong, Tai-Chi and more. Refer patients to the center to obtain specific scheduling information.

http://www.cancerhealthalliance.com/about.htm

**RESOURCES**

**American Cancer Society**

Physical Activity and the Cancer Patient

Review patient-oriented recommendations about exercise from the American Cancer Society here.


**American College of Sports Medicine**

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REFERENCEs


Ann Cuvala, Column Author

Awe-inspiring DNA has now been replicated!! Carol White has announced the birth of her 6th….yes, 6th grandchild. Her name is Ella Faye White. Carol, I know I haven’t seen you in a while, but you certainly don’t look old enough for even one!!

Our members are ALWAYS busy. Take Stacy Buza for example. She is three classes away from her MBA, AND is starting her PhD in November from the University of Phoenix. Last February marked her 10 year anniversary with U of C, and, she’s also celebrating her 2nd anniversary at Mercy working as a Float Nurse on Med-Surg Oncology. Stacy, the Oncology Unit at Mercy was my first and most favorite position. Dr. Subramanian took me under his wing, and boy did I fly. He made me the oncology nurse I am today! Stacy also has 2 daughters, Brooklyn (5) and Loghan (3). They are both in school at St. John the Baptist in Whiting, Indiana.

Our members continue their education! Ann Cuvala will complete her Certificate in Online Teaching and Learning through Governors State University in December. The Certificate program is a year-long program in developing an online course and producing the digital content.

And some are just plain crazy! Jean Ridgeway finished a full distance ironman September 7th in Ohio...that’s a 2.5 mile swim, 112 mile bike, and 26.2 mile run! Her goals: finish with a smile, have fun and walk well the next day. She crossed the line in 15 hours with a smile!!! She returned to work in 48 hours (without a limp). She was the first woman in her age group out of the water in under an hour, then off to a lovely ride in the Ohio country side. The wind picked up after 4 hours or so, but the rain held off. Her family followed her online and met her every 30 miles along the way, where she would stop, laugh, take pictures and eat...you get rather hungry out there. Then there was a marathon... Jean started training in January once she was cleared by her orthopedic surgeon as her broken clavicle (fractured in late August, 2011 on a training ride) could withstand the stresses and ROM with training. Lots of training...6-7 days a week, rain or shine, hot or cold. It was a great experience, most likely to be repeated next year.

Please send ANYTHING and EVERYTHING to Ann at acuvala@gmail.com. Pat yourself on the back….you deserve it!!

Jean Ridgeway
Mile 20 of 112!
Leukemia Research Foundation Selects
2012 Nurses of the Year

Joseph D. Tariman, Ph.D., ANP-BC has been selected as one of two, 2012 Nurses of the Year by the Leukemia Research Foundation (LRF). The Nurse of the Year Award, presented annually since 1996, was created to recognize hematology-oncology nurses who give their time, compassion, and heart each and every day. “Hematology/Oncology nurses care for patients with cancer and blood disorders. These nurses are true heroes, said Linda Kabot, the Leukemia Research Foundation’s Director of Programs and Research Grants Administrator. “The LRF recognizes their hard work and dedication each year with the Nurse of the Year Award. These extraordinary nurses are devoted to providing the highest standard of care to the patients and families they work with. Often, that care extends beyond their physical health, to include emotional support and long term follow-up treatment,” Kabot said.

Joseph has been a nursing professional for more than 20 years. He is an advanced practice nurse at the Northwestern University Myeloma Program in Chicago. He was nominated by two of his patients, one of whom wrote:

“Joseph makes every effort to manage, educate, and friend everyone in his care. He is a very skilled nurse as exhibited by his ability to do a bone marrow biopsy much faster and with far less pain than any nurse or doctor I have ever had. He is very knowledgeable and always willing to give his very limited time to his patients at any time of the day. He has gone way above his job description by receiving a Doctoral Degree.”

Joseph edited and co-authored a groundbreaking nursing book on multiple myeloma, published by the Oncology Nursing Society in mid-2010. He has authored or co-authored over 60 published articles, abstracts, monographs, and book chapters on various topics including multiple myeloma. He is a member of several editorial review boards. In addition, he serves as contributing editor for ONS Connect and is a column writer for Advance for Nurse Practitioners. The winners receive a $500 grant for their unit as well as a $500 grant for themselves and a party in their unit. The award was presented at the LRF’s 66th Annual Medical Awards Luncheon on October 14, 2012.
Wow, it is hard to believe that we are almost at the end of 2012. Community outreach continued this year with many initiatives that we started last year. CCONS Members, Victoria Frazier-Warmack, Ava Thomas, Georgina Menyah and myself continued to conduct educational programs on breast cancer awareness and encouraged proactive behaviors among women through the Beating Breast Cancer Program with Dr. Carol Ferrans, RN, PhD, from the University of Illinois at Chicago. These programs continue to be conducted in four targeted communities: Pullman, West Pullman, Roseland and Riverdale; however an expansion is anticipated and more CCONS volunteers will be needed to help with this initiative. Please stay tuned for future updates in upcoming newsletters. I want to thank each of the ladies for volunteering with CCONS for this community outreach program; because of your dedication we have conducted over twenty-five sessions! We still have a few more sessions scheduled this year and I will keep you abreast of the outcomes.

We completed, “Make the Cut” on May 6th at the Robert H. Lurie Comprehensive Cancer Center. Approximately 200 people attended the event with over 55 hair donors of all ages, 17 volunteer hair stylists and over 30 volunteers including CCONS members, Barb Gobel, Jodi Polanis, Teresa Yang, Mary Beth Riley, Mary Szyszka and myself. This event was a tremendous success.

On Sunday, September 16th CCONS partnered with Us Too®, Prostate Cancer, Education and Support Foundation for their eighth annual walk/run to pass out literature on prostate health and awareness, educate participants and to register the walkers/runners for this event. This is the oldest prostate cancer event in the Chicagoland area. I would like to thank Catherine Moran, Janet Golick, Marcia Mickle, Christa Lappin and Noreen O’Connor for volunteering with me. It was for a good cause, and I want to express my sincere gratitude for your dedication.

CCONS also supported The Jack Marston’s Melanoma Fund for the fourth straight year during the Chicago Marathon weekend. Maryjo Osowski, Karen Daly and Mary Szyszka volunteered and showed their spirit for CCONS during this event.

On October 3rd, I hosted a Breast/Ovarian Cancer Workshop at Chamberlin Nursing College. This opportunity was identified by our very own Mary Lappe, who has been working with Wendy Froman, a nursing student at Chamberlin. Wendy and I coordinated this workshop. I presented to approximately 25 nursing students and their professors. We had such a great time; and I was asked to come back next year. Thank you, Mary and Wendy for this opportunity. It was exciting to see the enthusiasm on the students faces as they learned the facts of breast and ovarian health. Look out, I know our membership will continue to increase with community outreach opportunities such as this!!

Last but not least, I want to encourage members to get involved with our community outreach programs. It is vital to the continued success of our organization. If anyone has ideas or suggestions for volunteer opportunities please forward them to me; your feedback is welcome and much appreciated.

smith.maggie@comcast.net.
Is Facebook and/or Twitter part of your daily routine? If you are interested in becoming part of a Social Media Committee incorporating the Virtual Community, Facebook, Twitter, etc., please contact one of us. We want to continue to find better ways to meet the informational needs of our membership, but in order to do this, we need your ideas and involvement!

Bev and Janet participated in online tutorials for the Virtual Community recently. Look for format changes in our VC that make it less cluttered and more user friendly. Visit our site at https://ccons.vc.ons.org to find chapter news, events and job opportunities.

Remember, there is no charge to CCONS members who wish to place a job posting or event to our site. Jobs posted on our site result in an automatic email blast to each chapter member. There is a job posting form that must be filled out and submitted for each position. This can be downloaded directly from the VC site.

The event posting form must be filled out and can also be found on the VC page. You may attach a flyer to your email (we can attach a flyer or PDF file to a posting by hyperlink) but all events submitted must be accompanied by our own event posting form.

Send upcoming events in your workplace or job postings to Bev or Jan.

bcaraher@amgen.com or janetgolick@comcast.net

MEMBERSHIP COMMITTEE
MARY LAPPE

I probably am no different than everyone else at this time of the year, surprised by the fact that another year has come and gone, and yet anticipating all the possibilities that a new year can bring.

The word has definitely spread about what a great chapter CCONS is; and we have a current roster of over 160 members. Numbers are one thing, but what has been tremendously rewarding is the active participation of the membership. This has been witnessed by standing room only meetings, a waiting list to attend the annual vendor fair, and an increase in the number of student nurses from universities all over the city checking out what a career in oncology nursing could look like.

Our motto for the 2012 year was “One in ’12” opening the door to every member to make a conscious effort to attend one of our chapter events. Although this goal was not entirely met, more members than ever before attended at least one meeting sponsored by CCONS, and the feedback and numbers speak for themselves. So thank you to everyone for being open to the invitation.

In an effort to keep this momentum going, everyone should have received a hard copy of a detailed membership letter, renewal application, and a preaddressed return envelope in the mail. The purpose of this is twofold. First of all, CCONS memberships expire on Dec. 31, 2012. Secondly, we want ALL our members renewed and informed about everything involved with CCONS from January 1st on. PLEASE remember to fill out all the information on the application. Your ONS member ID must be on the application form. If you did not receive an application form in the mail, it is most likely a result of your membership already paid through Dec. 31, 2013. All renewals and dues are to be returned by Dec. 15, 2012. If anyone you know would like to join our chapter, please feel free to download an application letter and form from our virtual community. Should you have any questions, do not hesitate to ask me or any of our membership committee members.

Upon closing, I would like to take this opportunity to recognize and thank the wonderful members of Membership committee: Wendy Froman, Jo Lisowski, Catherine Moran, and Jodi Palonis. Their efforts, contributions, and selfless donation of time, have allowed CCONS to reach out to so many individuals dedicated to, or thinking about, the very wonderful profession of oncology nursing.
Our next program will be held on Wednesday, November 28, 2012.

**A New Approach to Treating Advanced Hormone Receptor-Positive, HER2-Negative Breast Cancer**

Mary Pat Johnston, RN, MS, AOCN ®
Oncology Clinical Nurse Specialist
ProHealth Care Regional Cancer Center
Waukesha, Wisconsin

Maggiano’s
516 N. Clark St. (entrance on Grand Ave)
Chicago, IL 60654
312-644-7700

Please RSVP to Kathleen Bonnefoi, onsrn1@aol.com by 11/26/12

We gratefully acknowledge Novartis Oncology for their sponsorship for this non-CE educational opportunity. More information can be found on the CCONS website: [www.ccons.vc.ons.org](http://www.ccons.vc.ons.org).

Thank you to the members that filled out the annual membership survey. The results will help direct our topics for the 2013 program year. We will have the calendar of events for 2013 published soon on the VC.

Join us in welcoming our newest member to the Program Committee:
Aisha Brownlee, RN, MSN, NP-C, AOCN ®

**CCONS Program Committee Members**

Carol Blendowski
Kathy Bonnefoi
Aisha Brownlee
Carol Flanagan
Barb Kinast
Lynn MacMillan
Pam Nosse
Noreen O’Connor
Marge Pierce
Katharine Szubski
Teresa Yang

*New members welcome!*
Four years ago my friend Kristy passed away after a seven year battle with breast cancer. Knowing Kristy affected my life in many ways. Her friendship influenced me to become an oncology nurse and has forever changed the way I view the month of October. Breast cancer is no longer a hazy far off concept. It is real; and it took my loved one away. This October, I decided that Breast Cancer Awareness month would not be defined by what I lost, but by what I could help others save.

As an active member of the Student Nursing Association at Chamberlain College, I was privileged to chair the first annual Breast Cancer Awareness 3 Day Event. My vision was simple: educate as many people as possible about breast cancer risk factors, screening and prevention. My campus is shared with Chamberlain College of Nursing, Devry University, Keller School of Business, and high school students who are dually enrolled at Devry. The campus, students, faculty and staff from both schools, gave me accessibility to a wide range of women and men of various ages and ethnicities.

During the first two days of the event, 100 handmade pink ribbons and informative materials from the American Cancer Society, His Breast Cancer, Bright Pink, as well as the National Cancer Institute were distributed. Volunteers spoke with passersby about breast cancer risks and prevention for both men and women.

On the final day of the event, Maggie Smith, MSN/Ed/RN, OCN® delivered the closing educational session, “Breast and Ovarian Health 101 Workshop” on behalf of Bright Pink. Her presentation was followed by an engaging Q & A. Approximately 30 high school and college students as well as faculty and staff were in attendance.

I was inspired by the enthusiasm of the high school students, both male and female. I had the opportunity to speak to a 17-year-old girl who revealed during the Q & A session that she has a strong family history for breast cancer. I was encouraged that she had an opportunity to ask an oncology nurse her questions, learn about breast cancer screening and prevention, as well as how to properly perform a self-breast exam. Her experience alone made me feel that the program was a success.

My dream for next year is to expand the event to include the first week of October. I hope to increase the number of educational speakers and representatives from cancer awareness organizations.

I no longer dread October. I look forward to next year as a time I can honor the life that I lost by focusing on the lives I can change. If you are interested in participating in the 2013 Breast Cancer Awareness Event, or for questions or comments please contact me directly: wendy.froman@my.chamberlain.edu.

Pictured Above: Maggie Smith and Wendy Froman
Talk about someone who has touched your heart and why?

My dad was only 58 years old when he died from pancreatic cancer. He was one of nine children, lived through the depression, and never went beyond the eighth grade in school. He was a hardworking man and a kind person. At the time of his illness, I was in my late teens and saw his illness and his life through very young eyes. Almost 40 years later, I can still shed a tear when I think about how strong he was dealing with his cancer. It was the 1970s and we didn’t have the support of hospice care or good pain management. His pain was poorly managed with Codeine 30mg by mouth. This 230 pound man shriveled down to less than 100 pounds. He never became angry or complained and always had a kind word to say. Even though I was denied an adult relationship with him, I hope he knows that my 30+ years in oncology is my tribute to him.

What would you want to teach oncology nurses based on your experience with your dad?

Losing a parent at a young age does impact the rest of your life. You don’t realize at the time because you have the emotional padding of youth. As nurses, we focus on very young children losing a parent. Never underestimate how hard it is for those teenagers. They might act tough and sassy. At the time of their parent’s illness, they are often ignored at home and in the health care setting. I am always surprised when I look a teenager in the eyes and say, “And how are you?”. Most of the time they look shocked to be asked the question.

If you could pick anyone in the world to have dinner with, who would you select, why, and where would you go?

That’s easy. Michelle Obama. We both grew up as Southside girls living in blue collar families. We also took the CTA to get to our Chicago Public High Schools! Now she may be a bit more accomplished with living in the White House, but I’ve been a busy little oncology nurse! Regarding the restaurant, I would let HER choose to fly me anywhere in that big plane called “Air Force One” and go to any restaurant she wanted!!!!

What is something that helps you relax and unwind?

Enjoying the company of people who make me laugh. I love to laugh and say silly things that make other people laugh. I am also a huge fan of “Dancing with the Stars” and watching old repeats on television. My favorite is the “Andy Griffith Show.”
What is your idea of the perfect vacation?

I love to feel mentally stimulated and still be taken care of. That is why I am not a camping girl. Too much work! An example of one of my favorite vacations was when we went to Alaska in 2009. I just had to be on the tour bus at a specific time, didn’t have to wash any dishes, and enjoyed a breathtaking view everywhere we went.

What would you tell nurses that are interested in oncology nursing?

Oncology nursing is not a job; it becomes a part of who you are. You start to see the world with different eyes. If you aren’t happy or feel overwhelmed with your first opportunity, look for another. I’ve been a staff nurse in hematology-oncology, “chemo nurse” at Mt. Sinai, and home care nurse. I have worked as a radiation oncology nurse with the Rush group and am now at the University of Chicago. Though the economy is tight at this present time, in your overall career you will have the chance to move around and find an environment that encourages you to learn and feel passion for what you do.

What is the lasting impression you hope to make on others?

I taught my daughter to judge people with her heart and not by what she sees. I hope that people view me as following the advice I gave to Carlyn. I would also hope that folks would remember the times I made them laugh!

Regional ONS Chapter Contacts

Mary Phelan Lappe, Column Author

Below are the contacts for information on other local ONS Chapter meetings.

Northern Fox Valley Chapter ONS
Meetings held 3rd Tuesday of each month March through November
Mary Damhauser
njimmd@aol.com

Chicago Western Suburbs Chapter ONS
Meetings held quarterly
Lisa Pittman
lpittman@comcast.net
and
Caroline Mangan
Mangan.c@comcast.net

Southeastern Wisconsin Chapter ONS
Mary Ann Biederwolf
moncm@gmail.com

Northwest Indiana Chapter ONS
Meetings held 4th Monday of most months
Lisa Crabtree
lcrabtree1967@yahoo.com
Chapter Election Party Packs Now Available
The 2013 ONS National Election is right around the corner and ONS is happy to present a slate of well qualified candidates for your review. ONS had great success last year with the chapters who hosted voting parties during their January or early February meetings. These parties helped to increase the ONS voting percentage to 11.4%! Interested in your chapter’s voting percentage? [Click here](#).

To support this activity, ONS is offering an election party pack for chapters interested in hosting this type of event. The party pack includes the following items:
- Orange and Blue Balloons
- An ONS logo Mylar balloon
- Orange and Blue Streamers
- Orange & Blue Necklaces
- ONS Pens
- A listing of all of the chapter voting percentages from 2011 & 2012
- The ONS Campaign Policy
- A letter and information from each of the candidates

Don’t forget… three chapters (one each from small, medium, & large chapters) will be awarded $1000 for the highest voting percentage! Imagine how much your chapter could do with an extra $1000.

If you and your chapter are interested in receiving one of these party packs, please fill out this [form](#) and return to ONS. The Election Party Packs will be sent on a first come first served basis starting in early December. Thank you for supporting the ONS Elections!

Important Update on Chapter Membership Model
At the Chapter Leadership Workshop in July, ONS announced the Board of Directors’ approval of the new Chapter Membership Model. Naturally, it created quite a buzz of excitement among the nearly 300 attendees which led to many questions about the transition to the new model. ONS has created a detailed and informative [Frequently Asked Questions (FAQ)](#) document that addresses just about every question related to the model. The FAQ will remain posted to the Chapter Virtual Community home page throughout 2012 and 2013. As we move forward with the transition, which is expected to be completed sometime in 2013, we will keep the chapter leaders posted on all major developments.

It’s Not Too Early To Mark Your Calendars for the 2013 Chapter Leadership Workshop!
The 2012 [Chapter Leadership Workshop](#) (formerly called ‘Mentorship Weekend’) was the largest ever, with nearly 300 chapter leaders in attendance. And because attendance is expected to top 300 in 2013, ONS is moving the location of the CLW to a nice downtown Pittsburgh hotel located along the [scenic riverfront](#)! Mark your calendars for the weekend of July 26-28, 2013. Details to follow!

Chapter Virtual Communities
And finally – and perhaps one of best recommendations we can make – add our [Chapter Virtual Communities](#) website to your ‘Favorites’ site on your PC, iPad, or smart phone! This is the home page for ‘all-things’ chapters. Just about every chapter document, form, policy manual, guideline, staff contact information, you name it - is housed on this site. It’s your one-stop-shop for chapter operations and management resources!
Advanced Practice Nurse

Stem Cell Transplant

The University of Chicago Medicine, Section of Hematology/Oncology, has an opening for an Advanced Practice Nurse for our adult stem cell transplant team. The APN will collaborate with the faculty to manage our inpatient transplant service. Our transplant program performs autologous, allogeneic and matched unrelated donor (MUD) transplants in leukemia, lymphoma and multiple myeloma. Qualifications for the position include: Graduate of a National League for Nursing accredited School of Nursing with MSN required; current licensure as a Registered Nurse and Advanced Practice in the state of Illinois required; AACN certification as a ACNP and/or AOCN required; ONS Chemotherapy Provider preferred; minimum one year of hematology/oncology clinical nursing experience with demonstrated clinical competence in patient care, teaching and management of patients with a cancer diagnosis, and knowledge about clinical aspects of oncology including protocol therapy preferred. Apply on-line at http://jobs.uchicago.edu requisition 090988. The University of Chicago is an Affirmative Action / Equal Opportunity Employer.

Staff Nurse - Aphaeresis / Transfusion Blood Center Part Time Position

Northwestern Memorial Hospital, Chicago

11th Floor Galter Pavilion

Part time evening RN position for an experienced apheresis nurse. The RN will function in both the inpatient and the outpatient setting to provide aphaeresis (including TPE - Therapeutic Plasma Exchange), stem cell harvest and red cell exchange) and photopheresis, blood component therapy and immunoglobulin therapy.

The Apheresis RN will provide care to patients receiving stem cell harvest, TPE, photopheresis, blood component therapy, and immunoglobulin therapy. This position will require on-call responsibilities.

*Qualifications/Requirements: Minimum one year current clinical nursing experience in Aphaeresis Nursing / Blood Center and aphaeresis experience required. Current license as a Registered Professional Nurse in the State of Illinois (or license pending); current BLS certification and Baccalaureate or Master's degree from an accredited school of nursing REQUIRED.

** Will consider RNs with Dialysis experience.

*Hours: 0.6 = 24 hrs/wk, 48 hrs/pay period part time evening shift

*Application Instructions: apply online at www.nmh.org *Job Title: KSG20122109-77166

*Contact Name Karen S. Gillett, RN Senior Recruiter, kgillett@nmh.org, 312-926-7792
EDITOR’S MESSAGE

Fall is here. The leaves are changing, the nights are longer and there’s a crispness in the air. Everywhere I look there are reminders that the holidays are quickly approaching and another year is coming to an end.

As I write my final editor’s message, I want to take a moment to remember Sandy Purl. Her loss was devastating to our chapter and to the newsletter. Sandy was a friend and mentor and it was a privilege to serve with her as co-editor. I miss her each time I work on an edition and I know she would be proud of our accomplishments and the evolution of our chapter and the newsletter.

I want to thank Carol Knop for stepping into Sandy’s shoes and working tirelessly with me for the last two and a half years. I can not fully express how invaluable her commitment and dedication has been. Carol is a true asset to our organization and her talents, enthusiasm and pursuit of perfection have elevated the quality of the newsletter.

I would also like to extend a heart felt welcome to MaryEllyn Witt as she assumes the role of co-editor. I know she will do an excellent job; and I am happy to be leaving my responsibilities in her capable hands. I am eager to see what exciting and innovative changes she and Carol bring in 2013.

Lastly, thank you to the long-standing and new members of the newsletter committee. We have worked well together for many years and without you none of this would be possible.

~Ima
BOARD OF DIRECTORS AND COMMITTEE CHAIRS

PRESIDENT
Dani Gale, ND, AOCNP®
630.248.5546
dani.gale74@yahoo.com

PRESIDENT-ELECT
Christa Lappin, RN, BSN, OCN®
708.846.0627
christalappin71@gmail.com

SECRETARY
Marc Epstein-Reeves, APN, C-NP, OCN®
312.415-1822
marcerrn@gmail.com

TREASURER
Denise Lapka, RN, MS, AOCN®
708-408-1978
lapka.denise@gene.com

TREASURER-ELECT
Marcia Mickle, ACNP, AOCN®
312-695-4780
mmickle@nmff.org

DIRECTOR-AT-LARGE
Maggie Smith, MSN/Ed, RN, OCN®
773.251.9707
Smith.maggie@comcast.net

DIRECTOR-AT-LARGE
Josie Howard-Ruben, MS, RN, APN-CNS, AOCN®
847-208-8284
josiehowardruben@gmail.com

ARCHIVES
Maryjo Osowski, RN, MSN, AOCN®
708.352.2998
mosowski@gmail.com

MEMBERSHIP
Mary Phelan Lappe, RN, BSN, OCN®
847.268.8668
mphelanlappe@gmail.com

NEWSLETTER CO-CHAIRS
Ima Garcia, RN, MSN, AOCNP®
312.758.4626
Ima_garcia@hotmail.com

NOMINATING
Christa Lappin, RN, BSN, OCN®
708.846.0627
christalappin71@gmail.com

PROGRAM CO-CHAIRS
Katharine Szubski, RN, BSN, OCN®
847.845.7978
klszubski@yahoo.com

RESEARCH
Barbara Holmes Gobel, RN, MS, AOCN®
312-926-6443
bgbobel@nmh.org

VIRTUAL COMMUNITY CO-CHAIRS
Bev Caraher, MSN, APRN-BC, AOCN®
708.655-5339
bcaraher@amgen.com

FAMILY LIAISON FOR SANDY PURL SCHOLARSHIP FUND
Mary Ellyn Witt, RN, MS, AOCN®
773.702.0284
mwitt@radonc.uchicago.edu
2013 CCONS MEMBERSHIP APPLICATION

ONS# (required for CCONS membership): _____________
Expiration Date (required): _____________

*No membership will be processed without the required ONS# and expiration date*

Membership Category: _____ New Member _____ Renewal _____ Retired
 _____ Student _____ Physically challenged

Recruited by: ___________________________________________________________

MAILING ADDRESS

Name (please include all credentials): __________________________________________

Address: ________________________________________________________________

City: _________________________________________________________________

State: ____ Zip Code_________ Preferred Phone Number_______________________

Email: _________________________________________________________________

Are you on Facebook?  Yes______  No_______

Place of employment: _________________________________________________

Years in Nursing___________ Years in Oncology Nursing___________

Specialty area: __________________ Inpatient_____ Outpatient_____

Initialing here indicates my permission to use a photo with my image for purposes connected to CCONS__________

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