Case Study Layla, a newly graduated paediatric oncology nurse, was assigned to care for a patient with metastatic osteosarcoma.It is widely acknowledged that oncology nurses are among health care professionals who experience stress due to various physiological and psychological factors in the workplace (Campos de Carvalho, Muller, Bachion de Carvalho, & de Souza Melo, 2005; Chang, Kicis, & Sangha, 2007; Hinds et al., 2003; Isikhan et al., 2004).Conversely, Maslach, Schaufeli, and Leiter (2001) articulate that burnout syndrome is composed of emotional exhaustion, distancing from the patient, and reduced personal achievement (Italia, Favara-Scacco, Cataldo, & Russo, 2008; Maslach et al., 2001).Without proper prevention and management of stress, patient care is at risk because of decreased productivity, and ineffective or unsafe patient care serves as a costly outcome to the institution as increased absenteeism or turnover can ultimately occur (Medland, Howard-Ruben, & Whitaker, 2004).It has been shown that negative consequences of stress may cause, but are not limited to, psychological illnesses, such as depression and anxiety, in addition to somatic symptoms including headache, gastrointestinal disturbances, hypertension, and increased fatigue (Isikhan, Comez, & Danis, 2004; Papadatou, 2001).This review aims to provide a synthesis of current literature to assist paediatric oncology nursing administration, advanced practice nurses, and staff nurses in understanding the role of stress and the importance of pre-emptive stress reduction and coping interventions.Furthermore, other sources that may induce stress in the pediatric oncology nurse are conflicts with colleagues, increased role responsibilities, long and tiring working hours, lack of time for socialization, and troubles encountered with patients and their families (Isikhan et al., 2004).Wilson, Ganley, Mackereth, and Rowswell (2007) studied the effects of CAM in an oncology center demonstrating a decrease in harmful physiological and psychological effects of stress including anxiety, depression, and increased blood pressure.Nursing administration, advanced practice nurses, and staff nurses are encouraged to employ recommendations to decrease stress in the pediatric oncology setting, thereby avoiding chronic effects such as compassion fatigue and burnout.Literature reviewed is limited to data published from 2000 to 2011, with the exception of 2 landmark articles published in 1982 and 1990, which were used for their descriptions of the Stress Response Sequence Model and the Stressor Scale for Paediatric Oncology Nurses.Studies were searched with the following terms: nursing, oncology, cancer, stem cell transplant, paediatric, infant, child, adolescent, psychological adaptation, stress, burnout, compassion fatigue, coping.Nurses acknowledged the benefit of consistent psychosocial and debriefing rounds in which one professional stated, "It was phenomenal . . . just knowing you would have that outlet on a weekly basis, I just thought that was really valuable. I would love to see something like that started again" (Wenzel, Shaha, Klimmek, & Krumm, 2011, p. 278).Nursing researchers explored the use of a clinical resource nurse for newly graduated nurses who work in the pediatric oncology environment (MacKay & Bellamy-Stack, 2010).Although paediatric oncology nurses grieve over their patients during treatment and even after their death, standardized guidelines for clinical interventions aimed at decreasing the effects of the stress response on the caregiver do not currently exist.This review of literature compiles previously published articles, which explore stress experienced in paediatric oncology staff nurses and complications, such as compassion fatigue and burnout.However, focused coursework and seminars should begin during undergraduate nursing programs as part of the pediatric curriculum for individuals

interested in oncology or other chronic illnesses.A wide variety of data are available to support the argument that pediatric oncology nurses are at increased risk of experiencing stress(Campos de Carvalho et al., 2005; Chang et al., 2007; Hinds et al., 2003; Isikhan et al., 2004).Review of Literature/Method A literature review was published addressing coping and resilience factors in paediatric oncology nurses (Zander, Hutton, & King, 2010).In creating a comprehensive framework, this review will expand the focus by synthesizing currently used interventions to reduce stress in the paediatric oncology nurse.Inclusion criteria required that articles were written in English and described physiological or psychological adaptations in nurses caring for paediatric patients with chronic conditions or malignancy.Specifically, oncology nurses are at risk for experiencing compassion fatigue due to the demanding psychological and physiological stressors in the workplace (Aycock & Boyle, 2009).These methods of coping with stress are repeatedly used by pediatric oncology staff nurses but traditionally as reactive mechanisms opposed to routine prevention.If nurses are unable to relieve their patients' experiences of suffering, an increased stress response may occur (Papadatou, Bellali, Papazoglou, & Petraki, 2002).Furthermore, paediatric oncology nurses often care for high acuity patients with a terminal diagnosis creating an environment with minimal time for self-reflection.Articles used were found within Medline (OVID), PubMed Plus, CINAHL (EBSCO), PsycINFO, Sociological Abstracts, and Social Work Abstracts (EBSCO).Interventions employed to reduce these outcomes are analysed and recommendations for clinical practice based on these studies are presented.Compassion fatigue can be best understood as severe exhaustion, which occurs after providing continued care to individuals enduring pain or suffering (Sabo, 2006).Although various institutions recognize that stress is common among pediatric oncology staff nurses and programs have been developed, standardized clinical interventions are often unavailable for staff.Mechanisms to manage stress, such as social support, optimism, helplessness, and submissive approaches, were the common themes identified (Isikhan et al., 2004).Rolerelated stress may be reduced as the CSN can assist the bedside nurse with patient procedures, education, and providing care to difficult families (Chang et al., 2007).The valuable role of the CSN has shown to reduce stress within the pediatric oncology setting (Chang et al., 2007; MacKay & Bellamy-Stack, 2010).Statistically significant findings suggest that those who participated in art therapy experienced a decreased stress response through psychodrama and relaxation (Italia et al., 2008).Coping with stress may be enhanced within the oncology staff through CAM and art therapy, potentially improving attendance and productivity in the workplace.This intervention may be a useful model for hospitals as improved occupation-related stress can lead to caregiver well-being, decreased levels of absenteeism, and enhanced patient care.Failure to identify stress or implement measures to decrease stress in paediatric oncology staff nurses increases the risk of debilitating exhaustion.Finally, conclusions are drawn for future directions of research in an effort to create a framework for comparative research as well as to encourage nursing leaders to better understand imposed stress on paediatric oncology nurses.Comprehension of this subject and methods to reduce complications are essential to decrease negative outcomes for the patient, staff nurse, and institution.Hinds, a researcher in the area of stress in pediatric oncology nursing, modeled her research from the Stress Response Sequence Model created by Elliot and Eisdorfer in 1982.A tool known as the Stressor for Pediatric Oncology Nurses was

consequently created to measure the intensity of role-related stress for such health care professionals (Hinds et al., 1990; Hinds et al., 2003). These numbers are significant because they illustrate that although oncology is a small subset of pediatrics, health care professionals are providing daily care at the bedside to thousands of children with cancer. Use of various interventions has been shown to assist nurses in their coping related to compassion fatigue and burnout (Maytum et al., 2004). The structure for conducting a storytelling session may include a listener prompting the storyteller to describe a pediatric oncology patient who was under their care and whose death was grieved. Of particular interest within pediatric oncology is the role of the clinical support nurse (CSN), who functions to assist nurses in their daily tasks during the workday. Additionally, oncology staff experienced benefits of CAM including increased levels of self-confidence, happiness, and relaxation (Wilson et al., 2007). During this workshop, staff members were exposed to a variety of activities designed to reduce and manage stress, such as group meetings, individual counseling, skill building, and behavioral activities, focused on self-care. Clinical Practice Implications There is no single intervention that can prepare the nurse for each stressful event that may be encountered in the pediatric oncology workplace. Although the staff nurse must acknowledge when additional resources are needed to combat increased stress, this should not take the place of applying proactive strategies for stress prevention and management. Moreover, a pediatric oncology unit-based approach for debriefing may be beneficial as staff working within the division have daily interactions with one another and are therefore often aware of individual stress reduction needs. Communication regarding stress prevention, triggers, and management may be accomplished through group collaboration with the nurse manager during monthly staff meetings or by creating a unit-based committee facilitated by staff nurses to focus on stress reduction. It is important that nursing and hospital administration understand stress, compassion fatigue, and burnout ramifications to avoid occupational hazards, which may affect both the nursing staff and institution. Utilization of such interventions is likely to provide cost savings to the institution as decreased absenteeism and increased productivity may result. It is evident that oncology nurses encounter increased stress in the workplace and are in need of interventions to promote their well-being. A poor prognosis inevitably causes the nurse to play a role not only in providing care for the sick child but also in supporting the emotional needs of the family (Taubman-Ben-Ari & Weintroub, 2008). Research has widely accepted the need for increased support systems to foster coping for patients and families during oncologic diagnosis, treatment, and survivorship. Stress, Compassion Fatigue, Burnout Aetiology and Impact on Paediatric Oncology Staff Nurses Stress is a real and harmful effect of caring for children who are combating cancer and their families. Interventions Previously Explored and Their Effect It is important to use interventions to avoid stress and enhance coping within the pediatric oncology setting. Clinical interventions for coping with stress are often used by pediatric oncology nurses but only subsequent to the loss of a patient or traumatic event. To assess the advantage of prevention, a study was conducted that implemented weekly psychosocial rounds for oncology nurses. End-of-life education focusing on clinical management of patient symptoms and training in providing support to the patient and family has been regarded as constructive (Caton & Klemm, 2006). The pediatric oncology nurse has access to various modes of psychosocial support as time is specifically designated to stress reduction. Hospitals,

particularly those specializing in pediatric oncology, should work to preserve the mental health of employees such as staff nurses (Caton & Klemm, 2006).Generation of proactive methods may decrease repression of stress and increase caregiver wellbeing leading to quality improvement.Examples of CAM workshops may include massage and art therapy, meditation, yoga, and healing touch to promote respite care.Conclusions Whether it is skipping a lunch break to ensure patients have received their medications or holding the hands of an adolescent as she expresses fears about what it feels like to die, it is the oncology nurse who provides care and support for patients and their families.Declaration of Conflicting Interests The author declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.Background and Significance Stress is a known effect in nurses providing care to chronically ill children (Maytum, Heiman, & Garwick, 2004).Negative outcomes for the patient and their family members may otherwise result in addition to decreased nurse productivity within the institution due to compassion fatigue and burnout.Pediatric oncology nurses care for these children with direct interventions, such as chemotherapy and blood product administration, pain and symptom management, end of life care, and emotional support.It is clear that the job of a pediatric oncology nurse extends far beyond the workday as compounded grief often affects their personal lives.Isikhan et al. (2004) illustrated that nurses cope similarly when stressed.The objective of this workshop was to limit stress in oncology nurses to prevent burnout, with the hopes of retaining these nurses within the institution.Staff nurses working within pediatric oncology endure the challenge of supporting the patient and family during illness, which often includes the dying process in terminally ill patients.Furthermore, nurses may be expected to know how to cope with stress, as it can be an organic aspect of pediatric oncology.In addition to storytelling with peers working within the oncology unit, communication with family, friends, and clergy outside of the hospital setting is recommended for support.It is important to provide a comprehensive introduction to bereavement, palliative care, and psychooncology for staff nurses during new hire orientation.If institutional funding for these programs is unavailable, grants may be able to offset the cost.Nursing administrators and advanced practice nurses are leaders who have the knowledge and power to ensure resources are readily available.Future research is recommended to compare stress reduction interventions to determine those most beneficial and cost–effective in the clinical setting.A bond developed between the patient and nurse as the adolescent discussed some of her most challenging experiences and future aspirations since diagnosis.Layla listened as the patient expressed fears about not surviving long enough to have a first kiss, never receiving a driver's license, and not graduating from middle school at the end of the spring.After the nurses bathed, dressed, and wrapped the patient in a shroud, Layla embraced the patient's mother and together they grieved.This case study characterizes some of the typical responsibilities that a paediatric oncology nurse experiences.Data from these studies have shaped how stress in this population is understood According to the American Cancer Society (2012), 12,060 children below the age of 15 will be newly diagnosed with cancer in the United States in 2012.Understanding the meaning of stress, compassion fatigue, and burnout and how they interrelate is imperative before interventions can be considered.Factors that contribute to this target group include age, work experience, and marital status (Isikhan et al., 2004).A slight variation on debriefing is the approach of

storytelling for stress reduction.Two interventions to decrease the stress response, which are less commonly used, are complementary and alternative medicine (CAM) and art therapy.However, employing a wide range of stress prevention and management interventions can assist in decreasing the stress response.On a daily basis, a stress reduction intervention can include discussing patients' needs and support desired during a morning huddle with the unit leadership and staff nurses.Individual concerns of stress may be communicated with the nurse manager during evaluation meetings or regularly scheduled appointments with the hospital staff social worker.Improving bereavement education with an emphasis on coping interventions for stress is proposed.Continuing education regarding bereavement and stress reduction may offer added benefit as well for combating grief in the workplace.In an effort to holistically support the well-being of pediatric oncology nurses, CAM workshops could be offered during work time.Additionally, improvement in patient outcomes is likely as nurses are more physically and emotionally capable of providing efficient care.However, minimal studies have targeted the nurses who provide daily care to these patients (Conte, 2011).Several studies have been conducted to better understand how pediatric oncology nurses experience stress.Researchers have identified groups at higher risk for work-related stress within the oncology work environment.Nurses with less than 5 years of experience display increased levels of role related stress (Hinds, 2000).For example, support through clergy, family, and friends, in addition to debriefing, are prevalent ways to combat grief.A story is thereby created and listened to in an uninterrupted fashion and is then discussed with the listener to understand its meaning and advantage (Macpherson, 2008).The result of sharing personal experiences related to patients who have died has been suggested to be of value, leading to decreased stress in the pediatric oncology nurse.However, coping with stress for nurses in the workplace through end- of-life education is not always available (Aycock & Boyle, 2009).Recommendations specific to supporting the emotional and physical well-being of the nurse caring for these patients and families are often deficient (Conte, 2011).A recent study looked at the use of art therapy in oncology staff members who were at risk of burnout (Italia et al., 2008).Staff nurses must also be empowered to suggest novel ways in which coping with grief can be improved upon.Funding The author received no financial support for the research, authorship, and/or publication of this article.One week later, Layla arrived to work per her normal routine but was greeted with a dishevelled code cart outside her patient's room.Oncology is a subspecialty of paediatrics that brings great reward to the nurse caring for patients and their families.Ultimately, this may cause ineffectiveness in the workplace.Resources for stress prevention and management are essential to integrate into daily practice.It is often the staff nurse who grieves with the family after the patient has passed away and provides postmortem care.An all-encompassing stress reduction activity worthy of discussion is the use of staff retreats.An example of this model was created by Medland et al. (2004) and named the Circle of Care Retreat.Regular psychosocial rounds with a hospital staff social worker can often assist nurses in the bereavement process as well.The CSN may be key in assisting to cover a nurse's assignment in order to attend a relaxation session.Layla's heart began racing as she looked into the eyes of the patient's mother.The image of a mother who has lost her child is lasting and powerful, and Layla saw this for the first time.The CSN may be particularly advantageous for nurses who are less experienced.Several interventions have been tested to decrease stress and

found to be effective.Furthermore, 80% will survive 5 years or more, and 1,340 are expected to die.Therefore, it is unacceptable not to provide appropriate resources.Therefore, attention to the stress response in nurses is critical.