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Review Article

## Stress and burnout among gynecologic oncologists: A Society of Gynecologic Oncology Evidence-based Review and Recommendations



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HIGHLIGHTS

- There is a high prevalence of burnout among gynecologic oncologists.
- Physician burnout is associated with significant personal distress.
- There are practical solutions to reduce physician burnout and promote wellness.

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## 1. Introduction

Wellness is “a conscious, self-directed and evolving process of achieving full potential” as defined by The National Wellness Institute [1]. While this sounds like an aspiration for every gynecologic oncologist, achieving it requires dedication, effort, and time, resources that many physicians deplete at work. A career in gynecologic oncology can be extremely rewarding, but, it is universally strenuous and demanding. Caring for women with gynecologic cancers (and complex gynecologic problems) requires a significant and continuous commitment from providers which often becomes an all-encompassing mission. Unfortunately, this level of dedication can lead to burnout [2].

Burnout is a mental state defined by any of the following three elements: lack of enthusiasm for work, skepticism and distrust, and a low sense of personal accomplishment. Objectively, burnout can be measured by the Maslach Burnout Inventory, which assesses: emotional exhaustion, depersonalization and low personal accomplishment. The syndrome of burnout is present if at least one of the elements is significantly abnormal [3]. In addition to burnout, physicians may also experience compassion fatigue, also known as vicarious traumatization, which also follows from the stress caused by caring for ill patients. Compassion fatigue and burnout can coexist, but are distinct entities. Burnout is due to stressors related to interaction with the work environment and can include loss of empathy [4], while compassion fatigue is caused by the stress of the bond between the caregiver and the patient; empathy is preserved but caregivers become overwhelmed by the trauma to which they are exposed [5,6].

Burnout and compassion fatigue are endemic among healthcare providers. It has been estimated that half of all medical students, residents and attending physicians experience burnout, and that physicians suffer more burnout than do other American workers [7–9]. Conflicting data suggest that primary care physicians on the ‘front line’ experience the lowest job satisfaction and the highest burnout, while the oncology, trauma and surgical literature show that physicians dealing with the most acutely ill patients have a high prevalence of burnout. In a meta-analysis of burnout among healthcare professionals that care for patients with cancer, the prevalence of emotional exhaustion was 36%, depersonalization 34% and low sense of personal accomplishment 25%, with severe involvement in up to 51% of surveyed subjects [10]. Forty percent of surgical oncologists, 35% of medical oncologists and 64% of obstetrician gynecologists were estimated to have symptoms of burnout in specialty specific surveys [11–13]. While it is to be expected that caring for extremely ill and dying patients is emotionally draining, it is alarming that doing so causes potential harm to the physician as well.

Burnout has been studied among medical oncologists and surgeons; however, there is less data specific to gynecologic oncologists [14,15]. Job satisfaction and work related stress among gynecologic oncologists have been assessed [2], but until recently, burnout was not assessed. Two large, seminal studies, a 2014 survey of 369 members of the Society of Gynecologic Oncologists (SGO) and a 2008 survey of 7900 members of the American College of Surgeons (ACS), established the high prevalence of physician burnout in gynecologic oncologists and surgeons respectively, affecting 32%–40% of responders [16,17]. Both works are

cited throughout this paper and were driving forces motivating the Society of Gynecologic Oncology (SGO) to assemble a Wellness Task Force to address this issue. This paper represents an effort by the Task Force to acknowledge the high rate of burnout in gynecologic oncology as a specialty by bringing the subject forward for discussion, and exploring potential solutions.

## 2. Consequences of burnout

It is crucial to address physician burnout as its consequences extend beyond the individual physician and affect the entire profession, patient care, and society in general (Fig. 1).

### 2.1. Individual

Burnout is associated with mental illness, substance abuse, emotional exhaustion, depersonalization, and suicide. The SGO survey found that 33% of respondents screened positive for depression, 11% took medication for depression, and 14% experienced panic attacks [16]. The ACS survey corroborated this finding, with 30% of respondents screening positive for symptoms of depression [17]. In the SGO study, despite the fact that >40% felt overwhelmed and that life was ‘unmanageable’, only 9% of respondents sought psychiatric care in the previous 12 months, and 45% admitted reluctance to seek psychiatric care [16].

## Effects of Burnout

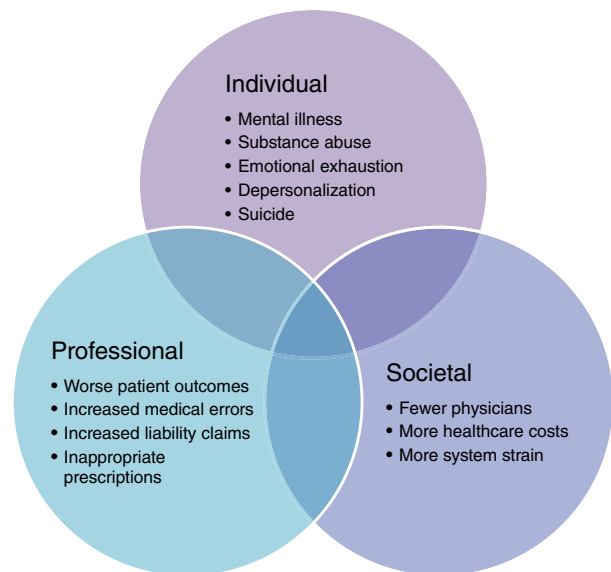


Fig. 1. Effects of burnout.

Physicians have higher levels of alcohol and substance abuse than the adult US population with rates of 10 to 15%, as opposed to 8% in the general population [18,19]. In a study looking at the incidence of substance abuse disorders in the entire American physician population, alcohol abuse or dependence was strongly associated with burnout ( $p < 0.001$ ) [20]. Substance abuse was identified in 15% of gynecologic oncologists in the SGO survey; burnout was significantly associated with a positive screen for alcohol abuse ( $p = 0.02$ ) as well as with depression ( $p < 0.001$ ) and suicidal ideation ( $p < 0.001$ ) [16]. In the ACS survey, the prevalence of alcohol abuse was nearly two-fold higher in female surgeons than among males, 25.6% versus 13.9%, respectively, and burnout was significantly associated with alcohol abuse or dependence ( $p = 0.01$ ) [17]. Suicide is also a significant problem associated with physician burnout. Suicide among U.S physicians is also higher than among non-physicians of similar-age. The odds ratio of suicide for male physicians compared to the general population is 1.41 (95% CI 1.21–1.65) and for 2.27 (95% CI 1.9–2.73) for female physicians [21]. Thirteen percent of responders in the SGO survey and 14% of responders in the ACS survey reported suicidal ideation [16,17]; higher than the rate in age, and sex-matched non-physician peers. Physician burnout was independently associated with a nearly two-fold increased risk of suicidal ideation [17].

## 2.2. Professional

Physician burnout negatively impacts patient care. It is related to suboptimal patient outcomes, increased medical errors (among attending physicians and those in training), increases in liability claims, and inappropriate prescriptions [22–28]. A study examining physicians' perceptions of the impact of work related stress on patient care found that one third of the doctors surveyed attributed poor clinical care, including serious mistakes in up to 10.5% of patients and two patient deaths, to work related stress [29]. Others have noted that patients of physicians with burnout are less likely to adhere to prescribed treatment plans [30]. Specifically one study found that diabetic patients with less empathetic physicians had worse health outcomes [31].

Although burnout was not associated with self-reported medical errors in the SGO study, several studies have documented a link between burnout and medical errors, as well as liability claims. In the ACS survey, 8.9% of respondents admitted concern that they had made a major medical error in the last three months, with 70% attributing the error to individual rather than system level factors. Burnout was an independent predictor of reporting a major medical error [22]. In a prospective study of Mayo Clinic internal medicine residents, 39% admitted to making at least one error during the six-year study period, which was significantly associated with burnout [32]. Similarly, in a 2013 survey of anesthesiology residents, 33% of respondents who had high risk of burnout scores reported multiple medication errors in the last year as opposed to just 0.7% of those who were lower risk for burnout ( $p < 0.001$ ) [33].

Patient satisfaction is also negatively impacted by physician burnout. Patients of physicians with high-emotional exhaustion and high depersonalization had significantly lower satisfaction scores compared with patients of physicians with low-exhaustion and low-depersonalization scores [34]. Physicians suffering from burnout also have higher referral rates, which may be a surrogate marker for overuse of resources, leading to unnecessary interventions for patients, and increased health care costs [35].

Malpractice lawsuits are more common among burned out physicians ( $p < 0.0001$ ) which contribute to higher rates of depression and suicidal ideation. In a study of the consequences of malpractice cases for American surgeons, burnout was independently associated with a recent malpractice suit ( $p = 0.03$ ), as was depression ( $p = 0.0003$ ), after controlling for all other personal and professional characteristics [24].

## 2.3. Societal

The potential ramifications of burnout are significant to society as a whole. Physician burnout is associated with decreased career satisfaction which can lead to lower productivity and efficiency [16,17]. Dissatisfied physicians are more likely to change jobs or leave medicine altogether, thus increasing cost and contributing to physician shortages [36,37]. Nationally between 300 and 400 physicians commit suicide each year, the equivalent of an entire student body of a medical school [38]. With anticipated physician shortages, particularly in the realm of oncology, the loss of highly trained physicians through suicide or early retirement will put increasing burdens on the medical system [37,39].

## 3. Causes of physician burnout

The current literature describes a multitude of factors that are associated with, and possible causes of, physician burnout. Because there are only a few studies that specifically assess gynecologic oncologists, much of what we understand must be extrapolated from larger studies of a variety of physician specialties including general surgeons, internists, and oncologists [2,14,15]. While each individual study has unique findings, there are common themes among the literature:

### 4. Job stress: practicing medicine in the modern era

One of the most important factors associated with physician burnout is job stress. Physicians as a whole, and particularly surgical and medical oncologists, deal with stress as an integral part of their daily work [11]. Caring for patients with cancer and interacting with their families is an emotionally demanding job. Studies have shown that burnout correlates with managing acutely ill patients, and dealing with the issues surrounding death and dying [10]. Among gynecologic oncologists, those physicians with a low perception of internal locus of control, and increased anxiety with end-of-life care, had greater work related stress [2]. Additional data has shown that oncologists who felt they had poor training in communication skills experienced higher rates of depersonalization, and lower personal accomplishment, while those who felt they had good training in communication skills experienced less burnout [40]. A 2007 paper that issued a call to action on surgical oncologist wellness, highlighted the “grief and guilt about patient loss or unsatisfactory outcome” as a further contributor to burnout [41,42]. Oncologic surgeons, in particular, face the additional stress of commanding an operating room and facing life or death situations on a regular basis [43]. Gynecologic oncologists are unusual in that they bear the dual responsibility of both the surgical and medical aspects of oncology. It is not surprising, therefore, that they are susceptible to burnout [14].

In general, the practice of gynecologic oncology is synonymous with managing a large volume of patients in clinic, busy operating room schedules, long work hours, and on-call duties [2,14,15]. By self-report in the SGO survey, almost 60% of gynecologic oncologists work over 60 h per week [16]. While this study did not find that increased work hours were associated with burnout, most other literature supports that self-determination of schedule and physician work load (number of work hours, surgical case numbers, and amount of call per week) is an independent predictor of burnout [7,14,17,41]. For example, a large study that included almost 800 obstetrician/gynecologists found that control over schedule and hours worked were strong predictors of the burnout components, emotional resilience, and personal accomplishment [44]. Multiple studies have also found that physicians in jobs where compensation is based exclusively on clinical productivity have increased risk of burnout [17,45].

There is also a culture in surgical fields of delayed gratification and bravado, in which the physicians' personal needs may be subjugated to his or her job [41]. Surgeons often place work duties above self and family during training and this pattern of behavior becomes hard to break once in practice [46].

Another facet of job stress has to do with the modernization of medicine. With the increase of managed care and electronic medical records, health systems both limit physicians' autonomy, and over-burden them with administrative duties. This can lead to a feeling of loss of control and a sense of inability to affect patient care, resulting in burnout [13, 47,48]. A Kaiser (health care maintenance organization) study found that sense of control over practice environment was one of the most important predictors of physician burnout [49]. Physicians who spend a greater amount of time on bureaucratic activity that they consider meaningless are at higher risk for burnout [50,51].

A 2015 Medscape survey across physician specialties demonstrated that an increased volume of bureaucratic tasks consistently ranked as the top cause of physician burnout. Increasing computerization of medical practice, and the impact of the Affordable Care Act were also in the top five causes of burnout in this 2015 survey [52]. Many physicians who derive the most professional meaning and satisfaction from taking care of patients perceive that increased bureaucracy, burdensome regulatory programs, and the increased documentation requirements of the electronic medical record, result in more time in front of a computer, taking away valuable time that could be used to provide meaningful patient care [49,52].

### 5. Work-life balance: walking the tight rope

Another key factor contributing to burnout is the challenge of work-life balance. The expectation that physicians be excellent at their job while maintaining a highly functional and rewarding personal life is daunting, and studies have found that difficulty balancing career with family/personal life is a major contributor to burnout [46]. In particular, a sub-analysis of the ACS survey showed that resolving this work-life conflict by prioritizing work over personal time is associated with burnout [53]. The survey noted that work-life balance issues predicted burnout equally in both genders, but the effect was more pronounced for women (62% of women experienced a conflict with a spouse/partner's career compared to 48% of men) [53].

Modern home computer technology can further challenge the work-life balance by enabling physicians to be forever "connected" to work. Twenty-four-hour access to patient records, shared communication with colleagues and on-demand educational resources, further blur the distinction between work and home. It is no surprise that the expectation that physicians check email regularly, document in the electronic health record, and respond to text results, even when they are not at work, has been associated with burnout [45,48].

### 6. Loss of meaning from work

Deriving a sense of meaning from work has been shown to reduce the risk of physician burnout [12]. In a 1997 job satisfaction survey of over 300 physicians, positive relationships with patients and colleagues, and intellectual stimulation, were identified as important components of job fulfillment [54]. More recent studies have confirmed these findings 20 years later. In a survey of internal medicine faculty in a U.S. academic medical center, a majority of respondents (68%) stated that patient care was the most meaningful aspect of work, with a smaller percentage reporting research (19%), education (9%), or administration (3%) [50]. It is apparent that different aspects of overall job satisfaction may be more or less relevant to specific physician subgroups. For example, McMurray and colleagues reported that a balance of career and family commitments were more important for women physicians, a sense of mission provided particular meaning for minority and inner-city physicians, and administrative issues were more significant for those in managed care [54].

In gynecologic oncology, like many medical subspecialties, there is a wide range of practice types, that consist of varying amounts of research, administration, education, and clinical work in both private and academic practice. [14,15,55] For example, a physician devoting

the majority of his or her time and effort to patient care would likely find different sources of job satisfaction and meaning than a physician who spends more time and effort in research.

There are additional factors that may negatively impact those physicians who derive the most meaning from research and education. In recent years, funding from the National Institutes of Health (NIH) that supports cancer research has declined [56]. It is increasingly challenging for translational scientists to secure funding and protected time for research, and this leads to the need for research during 'personal time'. Faculty who value education have experienced changes in the structure of training programs, leaving less time (and diminished value) for academic pursuits such as teaching [49]. Challenges to career fit also include changing interests and career drift that can develop over time [43,50]. For example, a gynecologic oncologist who enjoys spending most of her time in surgery may discover that she derives great meaning from quality improvement initiatives or hospital administration, but she may not be able to make the career shift due to financial or departmental constraints. An academician who finds education rewarding may find that he or she is spending less and less time teaching because of committee work or administrative tasks that diverts him or her from those activities. Periodic reassessment of what one finds professionally fulfilling, and attempts to prioritize those activities, may help to optimize job satisfaction throughout the course of one's career [50]. It has been observed that, "the greatest of all stresses does not come from a lack of sleep or time... It comes from believing deeply in one set of values and finding that you are trapped into living by another set" [57].

### 7. Risk factors for burnout

Risk factors for physician burnout provide some insight vulnerable physician groups, but some controversy remains. Female gender and younger age are consistently cited as risk factors [41]. In a large study of medical oncologists, variables strongly associated with burnout included: younger age, female gender, single relationship status, not having children, greater student loan debt, and greater number of hours spent seeing patients each week. However, on multivariate analysis, only younger age, and greater number of hours spent seeing patients, remained statistically significant [58]. The ACS survey confirmed the following risk factors for burnout: having younger children between the ages of 5–21 years (OR 1.35–1.41,  $p < 0.002$ ), income based entirely on patient care billing (OR 1.32;  $p < 0.001$ ), hours worked per week (OR 1.02 for each additional hour above 60 h), and number of nights on call per week (OR 1.06 for each additional night;  $p < 0.001$ ) [17]. A survey of 549 surgical oncologists found that both younger age, and female gender, were associated with higher rates of burnout. Factors associated with a higher risk of burnout on multivariate analysis were devoting <25% of time to research, lower physical quality of life, and younger age. Burnout was associated with lower satisfaction with career choice [41].

Female physicians face unique stressors making them more prone to burnout in many fields of medicine [41,59]. A recent study of over 7000 US physicians assessed work-home conflict in dual career relationships and found that female physicians were 60% more likely than male physicians to report signs or symptoms of burnout [60]. Female obstetrician/gynecologists tend to take more time away from clinical practice to care for their families than their male partners. One study found that up to 23% of female obstetrician/gynecologists under the age of 40 years have reduced their work hours, or had taken extended periods of time off compared to just 5% of their male counterparts [61]. The changing demographics of obstetrics and gynecology residencies, with almost 80% of graduates each year being female, may influence the work-force issues in gynecologic oncology [62].

Risk factors for burnout in the gynecologic oncology literature are unclear [2,14,15,55]. In the SGO survey, univariate analysis revealed that female gender, low mental quality of life, depression screen positive, feeling stressed and overwhelmed, suicidal ideation, reported alcohol abuse, and reluctance to seek care, were associated with a higher

risk of burnout. Multivariate analysis confirmed that all of these factors remained significant predictors of burnout except gender. Burnout was not associated with number of children, marital status, practice type, number of hours worked, spouse working outside of the home, or amount of vacation taken per year. Protective measures that were inversely associated with burnout were older age and greater career satisfaction [16]. Another study of work-related stress among gynecologic oncologists found that younger age, fewer years in practice, anxiety regarding end-of-life care, and low scores on perceived internal control, were all associated with work-related stress. Gender was not associated with higher work-related stress [2].

Beyond demographic descriptors, certain personality traits may also increase the risk of burnout by influencing the individual's response to stressors in the workplace. Compulsiveness is a character trait of many physicians that is reinforced throughout medical education and can have a detrimental impact on professional, personal and family lives [46]. Gabbard has described the compulsive triad of doubt, guilt feelings and exaggerated sense of responsibility in physicians [63]. Physicians with these attributes may have chronic feelings of not doing enough, guilt feelings that interfere with their own personal pursuit of pleasure, difficulty setting boundaries, and the tendency to confuse selfishness with healthy self-interest [64]. This diminished awareness of one's physical and emotional needs leads to a self-destructive pattern of overwork and ultimately burnout. Additionally, physicians tend to perpetually postpone attending to their significant relationships and other sources of rejuvenation [46]. To alleviate burnout, clinicians must function with greater self-awareness by controlling work-hours, minimizing stress interactions and optimizing personal accomplishment, so as to experience empathy as a mutually healing connection with patients [5,50].

## 8. Solutions

### 8.1. Self-care strategies to promote wellness

While awareness regarding the factors that contribute to physician stress is increasing, few studies address methods for preventing or treating the problem. There is evidence to suggest that self-care strategies, both relating to mental and physical activities, can improve wellbeing [65–71]. One integrative technique that is gaining in popularity utilizes the cultivation of self-awareness and mindfulness based practices [66–68]. Krasner et al. reported a 52-hour curriculum administered over a full year to primary care physicians that included narrative medicine, appreciative inquiry, and meditation. Study subjects experienced decreases in burnout and mood disturbances, and showed improved empathy [66]. Similarly, in a randomized controlled trial among faculty from the Department of Medicine by West and colleagues, an intervention group received 19 biweekly facilitated physician discussion groups which incorporated mindfulness, reflection, shared experience, and small group learning. Rates of depersonalization in the intervention group were reduced by 15% over three months and sustained at twelve months versus controls. Unfortunately, the impact on stress reduction, symptoms of depression, and overall quality of life or job satisfaction was not statistically significant [67]. In an 8 week adapted mindfulness intervention among 30 primary care physicians, participants had sustained reductions in burnout, stress, depression, and anxiety over 9 months. Based upon these encouraging results, further study of abbreviated mindfulness interventions, that are less time and resource intensive, is warranted [71].

Lessons from the relatively new field of positive psychology have demonstrated that people can improve their overall happiness through simple, daily, directed actions. Martin Seligman PhD, a pioneer in the field of Positive Psychology from University of Pennsylvania, has uncovered numerous small behavioral changes that contribute to personal well-being. These exercises include gratitude journaling, planned time outdoors, small acts of kindness, and regular mindful meditation (the purposeful quieting of one's thoughts). Studies have shown that a

combination of these acts and others, for as little 10 min a day, can result in significantly improved personal well-being. The benefit of these exercises is that they are easily actionable, with minimal requirements of resources, time, or training. Most importantly, maintaining these exercises has been associated with sustained personal fulfillment [72]. A Cochrane systematic review and meta-analysis of 47 studies and over 3300 participants found that mindfulness meditation for eight weeks had a moderate effect to improve anxiety and depression [73].

Other positive lifestyle factors including exercise, nutrition, sunlight, and sleep, are associated with improved mental well-being and a lower incidence of depression and anxiety [73]. A recent Cochrane review in 2013 concluded that exercise is moderately more effective than a control intervention for reducing symptoms of depression, although more robust trials are needed [74]. The WHO underscores the importance of physical activity in their 2010 publication *Global Recommendations on Physical Activity for Health*. The guidelines endorse physical activity to prevent depression. Age-specific recommendations for adults aged 18–64 prescribe at least 150 min of moderate-intensity aerobic physical activity throughout the week or at least 75 min of vigorous-intensity aerobic physical activity throughout the week, or an equivalent combination of moderate- and vigorous-intensity activity. Aerobic activity should be performed in bouts of at least 10 minutes' duration [75].

A 2010 follow up ACS survey of >7000 U.S. surgeons found that surgeons who complied with the Center for Disease Control and Prevention recommendations of regular aerobic exercise and who had seen a primary care provider in the past 12 months, reported higher quality of life and lower rates of physician burnout. The authors also explored the personal wellness practices used by surgeons and found that five specific strategies were associated with a lower risk of burnout on multivariate analysis including: finding meaning in work, maintaining a positive outlook, incorporating a philosophy stressing work-life balance, and focusing on what is important in life. The lowest rated personal wellness strategies were regular meetings with a psychiatrist/psychologist to discuss stress and reflective writing, which were associated with lower quality of life scores. The authors cautioned that results from this cross-sectional study could not identify dysfunctional strategies that contribute to burnout, because some strategies may have been more commonly used by surgeons who had already begun to experience distress [65].

These results were echoed in a study that examined the resiliency strategies employed by physicians that were not burned out. Resilient physicians cultivated “a diversified pool of social resources and fields of interest, together with realistic expectancies, and good self-knowledge” and were able to successfully cope with stressors at work reinforcing a sense of “professional efficacy”. They also celebrated positive professional events, and found gratification from medical successes [70]. Both studies emphasized that there is no critical wellness strategy common to all physicians. Rather, physicians should cultivate varied personal wellness strategies to reduce burnout and promote resilience [65,70]. Physician coaching can also be used as a way of improve self-awareness, increase one's sense of accomplishment, purpose, and engagement, all critical in managing burnout [76].

### 8.2. Role of departmental leaders, professional societies and health systems

The responsibility for promoting physician well-being lies not only with the physician but with the professional community in which the physician works. Shanafelt et al. surveyed 3896 physicians and scientists in a large healthcare organization and found that burnout and job satisfaction correlated with the leadership scores of the physician's division/department chair. They concluded that there was a host of organizational factors that impact physician wellness and physician leadership was one of them. Furthermore, and importantly, the authors felt that the traits of the most successful physician leaders were teachable and could be developed in leadership training courses [77]. Other solutions physician leadership can employ to improve physician wellness in their

departments are improving workflow processes (time pressures and pace) and communication between clinicians and staff. Measures as simple as reassigning clinic staff workloads, providing adequate administrative support, making schedules more flexible to meet family needs will improve the organizational culture and the work/life balance for many clinicians [77–80].

We are living in a time when the experience, lifestyle and expectations of each generation are changing more rapidly than at any time in human history. The core values of generations X and millennials are vastly different from the baby boomers. The life experiences of the younger generations lead them to place more value on work/life balance and they are more likely to be receptive to wellness programs. It is incumbent upon baby boomers, who presently occupy most leadership positions, to understand that our profession has become highly stressful and embrace a willingness to adopt healthier organizational paradigms. For example, professional productivity can be high with flexible hours that facilitate wellness, but it may be difficult for a leader from the baby boomer generation to embrace this work model as it differs from their previous approach and experience [81].

One role of professional societies is to educate and assist physicians throughout the continuum of their careers. Career guidance and mentorship by senior physicians in the society who have learned to manage work and personal life can help to instill mechanisms for resilience and coping in younger doctors. Professional societies are in the best position to endorse self-care strategies and personal wellness promotion practices to optimize the quality of life for their physician members. Professional societies are uniquely positioned to objectively recommend changes that are not tied to the economic or cultural challenges that may be present at the department, division or hospital level [42].

In response to the presentation of the SGO burnout survey at the 2014 Annual Meeting on Women's Cancer, the society formed a Wellness task force. All interested members were invited to participate. The birth of this task force reflects SGO's commitment to helping members understand the problem of stress and burnout in our profession. The task force also aims to find solutions that enhance the wellness of SGO members through presentations and courses at the annual meeting as well as by providing other resources related to work/life balance and self-management. Targeted sessions for fellows in training focus on the importance of establishing healthy patterns during the early stages of career building. We also will advocate for the integration of wellness education into the core curriculum of training programs so that healthy lifestyles are inculcated at an early stage in those who will follow in our footsteps. The wellness initiative, an SGO sponsored webpage, is under development which will provide links to online resources, a library of educational materials from the special sessions on promoting physician wellness for all members and opportunities for members to participate in future taskforce activities.

### 8.3. Mental health resources

The overwhelming reluctance of gynecologic oncologists to seek out resources in the setting of substance abuse or depression, as illustrated by the SGO survey, is an alarming reminder that our current system is inadequate. [16] We have to create a culture where individuals can come forward to seek help without fear of repercussions for their professional lives [16]. Health care systems should be encouraged to provide resources for individuals with drug/alcohol dependency and depression that safely minimize the disruption to their careers and protect their anonymity. Many health care systems provide physician well-being resources including anonymous evaluation, access to social services and psychiatric counseling. Efforts to define and share successful strategies to combat physician burnout need to be given a higher priority and coordinated across health care centers.

## 9. Conclusion

The SGO survey highlights the high prevalence of physician burnout and serves as a call to action. It is encouraging that gynecologic oncologists scored highly in their perception of meaning in their work, with 70% of respondents in the SGO survey reporting high levels of personal accomplishment. Most were satisfied with their careers, as indicated by the fact that 89% would enter medicine again, and 61% would encourage their child to enter medicine [16]. The unique aspects of the specialty of gynecologic oncology, namely the comprehensive continuity of care model and the fulfilling long-term relationships that gynecologic oncologists have with their patients, may contribute to the meaning and satisfaction they derived from their careers.

The preponderance of data presented show that while burnout is common, there are feasible and practical solutions. These solutions require frank discussions and a commitment of time and resources. Health care systems must publicly recognize that physicians have limitations and they may need help to navigate the vicissitudes of their demanding, but highly rewarding careers. We must also invest in further research of evidence-based solutions and teach our leaders (such as department chairs, program directors and national society leadership) strategies to both recognize, and address, burnout. The SGO survey highlights that physician burnout is common and reflects concealed mental health issues. The cost of physician burnout to society mandates recognition of the problem rather than continued denial. In this modern era, no gynecologic oncologist is an island which can, or should, singularly meet all of the complex needs of their patients or practices. We must choose to evolve, both individually, professionally, and as a society to combat burnout and promote physician wellness.

### Conflict of interest statement

Dr. Nefertiti duPont sits on the Advisory Board and provides consulting to Genetech. Dr. Premal Thaker provides consulting for Celsion. All other authors have no conflict of interest.

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