

Finding Meaning, Balance, and Personal Satisfaction in the Practice of Oncology

Tait D. Shanafelt, MD

Training for and practicing the specialty of medical oncology are stressful endeavors. During the training process, future oncologists often cope with their stress by assuming that “things will get better” after they complete residency and fellowship. This myth often leads physicians to sacrifice many of the personal values and activities that give life meaning. It also may perpetuate a philosophy of delayed gratification that leads to a loss of balance between personal and professional lives. If it is maintained for a long period, this imbalance may diminish personal resources that help oncologists cope with job-related stress and ultimately may contribute to physician burnout, a syndrome of emotional exhaustion and depersonalization that leads to decreased effectiveness at work. The insidious sacrifice of self during training and early practice may be perpetuated by the culture of residency/fellowship and the example of professional role models. Recognition that personal well-being is important provides oncologists the opportunity to reflect on values and make proactive decisions to combat burnout and enhance personal and professional satisfaction.

In this article, we propose three steps to help oncologists identify values, promote balance between their personal and professional lives, enhance the activities they find most meaningful in their work, and nurture activities that promote personal well-being. In addition, based on the suggestions of practicing oncologists, we offer recommendations for fellowship programs to help these professionals prepare oncology fellows for the challenges they will face in practice.

A Familiar Story

It is a story most of us know all too well, either from observation or personal experience. An anx-

ious but eager college graduate enthusiastically embarks upon his medical training. Full of commitment and idealism, he willingly focuses on his studies, sacrificing some hobbies and relationships to “become a good doctor.” Two years later, and numbed by textbooks, he is excited to begin his clerkships and finally focus on “caring for patients.”

During his first hospital rotation, he is awed by the knowledge of residents, yet stunned by their cynicism and irreverence. “I will never talk about a patient like that!” he vows. Taking call with “the team” also demands additional pruning of personal interests and activities; it becomes difficult to get to the gym anymore. He receives his diploma with a sense of accomplishment and pride. He is ready for the rigor of residency, but wonders when he will have time for relationships or a family.

Residency exacts a new toll: there is no life outside the hospital. The soldiers in this boot camp form strong bonds; the outside world does not comprehend their struggle. Sometimes, he finds himself thinking the same cynical thoughts about patients that once shocked him, and it disturbs him. He realizes that this experience may demand more than he wants to give. He steels his resolve to “survive.”

Fellowship is a similar experience. There are so many suffering patients and such limited ability to help. Friendships, hobbies, and spiritual practice once refreshed him in times like these, but he has been too busy for these pursuits, and they have atrophied. “Life will get better after fellowship,” he tells himself. After joining a prestigious practice, he wants to become a partner and willingly accepts extra patient visits and call nights as the “junior member” of the group. Sometimes, he worries he is not a good husband or father. “I’m a good doctor,” he reassures himself. He wonders if that is enough.

Things Will Get Better When...

Becoming an oncologist is a stressful endeavor embarked upon willingly by physicians who choose to make sacrifices for the privilege and rewards of caring for patients with cancer. The training experi-

Dr. Shanafelt is on staff at the Mayo Clinic, Departments of Oncology and Hematology/Oncology, Rochester, Minnesota.

Manuscript received October 8, 2004;
accepted October 19, 2004.

Correspondence to: Tait D. Shanafelt, MD, Mayo Clinic, Department of Oncology, 200 First St. SW, Rochester, MN 55905; telephone: (507) 284-2511; fax: (507) 266-4972; e-mail: shanafelt.tait@mayo.edu.

J Support Oncol 2005;3:157-164

© 2005 Elsevier Inc. All rights reserved.

ence is a long and demanding process that affects all aspects of life and leaves a lasting impact. The process effectively imparts a tremendous amount of medical knowledge and trains individuals in the skills necessary to manage patients with malignant disease. Unfortunately, the demands of training often also lead physicians to sacrifice many of the hobbies, interests, and relationships necessary for them to maintain a balanced life [1, 2] and to help them empathize with patients [3–5]. As the familiar story above portrays, this sacrifice is often an insidious process.

The stresses of medical training are well described. Residents and fellows simultaneously must cope with sleep deprivation, long hours at the hospital, the pressure of mastering their specialty, patient death and suffering, an inability to control their schedule, financial stress caused by student loan debt, and a perception that their personal needs are inconsequential [6–9]. Often, they face these challenges shortly after moving to a new city, where they have limited social support. Since a majority of residents are in their late 20s or early 30s, many also have responsibilities as spouses or parents, which carry an additional source of stress.

Coping with these personal and professional stressors is a major challenge. One study at a large academic medical center found that 50% of internal medicine residents manage their stress by taking a “survival attitude” that puts their personal lives on hold until they complete residency [6]. This approach often unintentionally diminishes relationships, religious/spiritual practice, and self-care activities that remind residents of their personal value and provide rejuvenation from the stress of work. Depression, burnout, suicide, broken marriages, and substance abuse are some of the tragic consequences that occur all too frequently among intelligent, committed, and well-intentioned young physicians [6, 8, 10–14].

Intrinsic to the “survival attitude” is the belief that “things will get better” after residency/fellowship. A recent study of medical oncologists suggests this belief may be a myth. When asked to identify the most stressful period of their career (undergraduate, medical school, internship/residency, fellowship, or current position), “current position” was a close second to internship/residency as the most common response by oncologists [15]. Somewhat analogous to the “survival attitude” reported by residents, when asked to rate

the importance of various “wellness” strategies, 37% of oncologists rated “looking forward to retirement” as an 8, 9, or 10 on a 0–10 scale (0=not important; 10=essential strategy) [15]. Younger oncologists were as likely to report this strategy as their older colleagues. Tragically, these findings suggest that many physicians adopt a strategy of delayed gratification that sacrifices personal life early in training and maintain this coping strategy throughout their entire careers.

Frequently, physicians do not fully realize the consequences of this attitude until they complete training and are established in practice. They wake up one day and realize they no longer enjoy their work, they lost the connection they once had with patients, and they have given up many of the personal activities that give life meaning [16–18]. They further realize their distress at work is “spilling over” into their personal and family lives [19–21] and ask themselves, “What went wrong?”

Oncologist Burnout

Studies show that 30% to 50% of oncologists experience burnout [17, 22–24], a syndrome of emotional exhaustion and depersonalization that leads to decreased effectiveness at work [25]. Treating patients as objects rather than as human beings and becoming emotionally depleted are common symptoms of burnout. In a specialty where curative treatment is uncommon, many oncologists derive great professional satisfaction from relieving the physical and emotional suffering of patients and helping them come to terms with their illness [23, 26, 27]. The realization that they are not as caring as they once were can precipitate an existential searching and loss of professional direction [28].

Although burnout may occur in physicians of all specialties, many have speculated that oncologists’ frequent exposure to death and suffering may place them at particularly high risk [17, 23, 29–32]. In addition to frequent exposure to patient suffering, other factors also contribute to loss of satisfaction for oncologists—particularly in recent years. Decreased autonomy [16, 17, 33–35], increased workload [23], increased governmental and insurance reimbursement issues [15], demands of office management [15, 17, 23], and a rapidly expanding medical knowledge base [15] have changed the landscape of medicine. In a recent study of medical oncologists, heavy patient load, dealing with patient death and suffer-

ing, keeping current with the medical literature, delivering bad news to patients, and balancing personal and professional lives were considered to be the greatest stressors [15].

Difficulty finding the right balance between personal and professional roles is a central theme in studies exploring oncologist distress [15, 22, 23]. In at least two studies, oncologists believed that inadequate time away from work was the single greatest cause of burnout [22, 23]. The absence of modeled work-life balance by supervising physicians during training may perpetuate this problem. Medical students and young physicians often admire senior colleagues for their knowledge and commitment. The supervising physician who can quote the latest study, apply scientific knowledge, spend extra time teaching house staff, and be available to their patients at all hours is revered as the “model physician.” Many young physicians seek to emulate these qualities. Yet there is a price for this singleness of purpose. The lack of opportunity for young physicians to observe how these professional role models successfully or unsuccessfully combine their personal and professional lives limits their ability to determine whether they wish to fully emulate these physicians. Often, young physicians fail to realize that the professional path they are following leads to personal unhappiness until they experience it themselves.

Recommendations for Oncologists

Recovery from burnout is possible [11, 36]. This renewal often requires reassessing priorities, changing the focus of work, limiting certain aspects of practice, and refining one’s approach to dealing with patient death and suffering [37]. Such changes often go against the dominant norms of professional culture and may require individuals to “swim against the current” [38]. Based on the similar wellness strategies reported by diverse groups of physicians [15, 38, 39], a three-step process of identifying values, optimizing meaning in work, and nurturing personal wellness activities may be a useful guide.

STEP 1: IDENTIFYING VALUES

Assessing values and establishing priorities can be important steps to evaluating personal well-being. Once a list of personal and professional goals is generated, a period of reflection to determine how specific aspects of these two lists can or cannot be combined is revealing. A series of questions

Table 1
Questions to Identify Values

1. What is my greatest priority in life? Have I been living my life in a way that demonstrates this?
2. Where am I most irreplaceable? At home? At the hospital? Elsewhere? ^a
3. Do I have adequate balance between my personal and professional lives?
4. Am I asking more of my spouse and children than I should? ^a
5. What kind of a legacy do I want to leave my children?
6. What person or activity have I been neglecting?
7. If I could relive the past year, what would I spend more time doing? What would I spend less time doing? What changes do I need to make to help this happen this year?
8. Why did I choose my profession? ^b What do I like most about my job?
9. What would I like my life to be like in 10 years?
10. What do I fear? ^b

^a From Myers¹³ ^b From Clever⁴⁰

can be used by physicians as a tool to identify their values and negotiate priorities between personal and professional domains (Table 1) [40]. Once priorities are identified, they can be used to determine which activity will be sacrificed if two activities are incompatible.

Placing family and personal needs as the top priority is viewed by some physicians as a lack of professional commitment. For most physicians, however, prioritizing family and personal needs over work recognizes that personal and professional needs must be balanced and that enthusiasm for work is a limited resource that must be replenished through adequate attention to personal needs. Oncologists in the North Central Cancer Treatment Group (NCCTG) who reported a high level of overall well-being rated the importance of a number of specific personal wellness promotion strategies as markedly higher than did those without high overall well-being. Incorporating a life philosophy that stressed balance between personal and professional lives ($P < 0.0001$), developing an approach/philosophy to dealing with death and end-of-life care ($P < 0.0002$), and using recreation, hobbies and exercise ($P = 0.0009$) all were rated dramatically more important strategies for oncologists who had high well-being [15]. Thus, although negotiating the right balance between personal and professional lives is a major source of stress for oncologists

Table 2**Steps to Promote Personal Well-Being**

1. Identify personal and professional values and priorities
Reflect on values (see Table 1). Strive to achieve balance between personal and professional lives. Make a list of personal values and priorities; rank in order of importance. Make a list of professional values and priorities; rank in order of importance.
Identify areas of conflict where personal and professional goals may be incompatible.
Integrate these two lists. Based on priorities, determine how conflicts should be managed.
2. Enhance areas of work that are most personally meaningful
Identify areas of work are most meaningful to you (palliative care, patient education, medical education, participation in clinical trials, research, administration).
Find how you can reshape your practice to increase your focus in this area.
Decide if improving your skills in a specific area (delivering bad news, managing an office, or providing palliative care) would decrease your stress at work, or if seeking additional training in this or other areas be helpful for you.
Identify opportunities to reflect with colleagues about stressful and rewarding aspects of practice (story-telling groups, Balint groups ⁴⁵ , others).
Interests change; periodically reassess what you enjoy most about work.
3. Identify and nurture personal wellness strategies of importance to you
Protect and nurture your relationships.
Nurture religion/spirituality practices.
Develop hobbies and use vacations to encourage non-medical interests.
Ensure adequate sleep, exercise, nutrition.
Define and protect time for personal reflection at least monthly.
Obtain a personal primary care provider and seek regular medical care.

Meaning, Balance, and Satisfaction

[15, 23, 22], a significant benefit may be reaped by those who achieve this balance [15].

STEP 2: OPTIMIZING MEANING IN WORK

Although most physicians experience significant stress at work, job satisfaction appears to help prevent stress from becoming burnout [17, 41]. After they define values and establish priorities, oncologists must determine how to maximize their satisfaction from work. The psychological construct of “flow,” a state characterized by intrinsic motivation, peak interest, and absorption in work, can be a useful paradigm in this regard [42]. This concept states that an appropriate matching between challenges and skills provides the optimal opportunity for individuals to find meaning and satisfaction. Individuals who experience too little challenge will experience boredom, whereas those who face challenges that far exceed their skills will experience anxiety. When the optimal fit is achieved, individuals experience flow [42].

A variety of work-related activities, including palliative care, research, patient care, administration, and educational activities, provide op-

portunities for flow. Since each physician cultivates a unique set of knowledge, interests, and skills, the optimal challenges to promote satisfaction for each individual are unique. For one physician, practice management may be a source of depletion, whereas it may provide a sense of challenge and accomplishment that enhances satisfaction from work for another. New responsibilities, such as taking over office management, initially may present a challenge for which a physician has little training and may be a stressful and unrewarding experience. For some individuals, however, developing skill in this area through education or experience may transform this initially anxiety-provoking task into a potential source of increased satisfaction. Additional training also may prove helpful for other stressful tasks for which many oncologists believe they are inadequately trained, such as delivering “bad news” to patients [23, 43].

The optimal mix of activities to promote satisfaction from practice also should be expected to change through the course of a career. What was challenging and rewarding early in practice later may seem mundane as knowledge and experience increase. Periodic reflection on activities (patient care, education, research, administration) or aspects of clinical practice (palliative care, specific disease focus) that provide optimal satisfaction allows individuals to tailor their work experience to maximize fulfillment. Such refocusing can provide oncologists opportunities to “change their job” without leaving their practice.

Although initially awkward for many physicians, opportunities to reflect with their colleagues about the challenging and existential aspects of practice can be another forum to promote self-awareness and identify meaningful aspects of work. Multiple formats for such reflection can be used and typically involve a small number of physicians who meet once every 3–4 weeks to reflect on a specific topic (eg, dealing with patient anger, patient death and suffering, balance between personal and professional lives). A period of individual reflection followed by facilitated discussion with a focus on shared experiences, rather than criticism or advice, is a theme common to all of these formats [38, 44, 45]. This time of discussion may remind physicians of what is most meaningful in the practice of medicine and may foster a sense of connection with colleagues.

Table 3**Self-Reported Major Stressors and Assessment of Adequacy of Training for a Variety of Tasks by Oncologists in the NCCTG**

STRESSOR	STRESSOR RANK BY ONCOLOGISTS (N=238)	ONCOLOGISTS WHO BELIEVED FELLOWSHIP ADEQUATELY PREPARED THEM IN THIS AREA (N=137)
Patient load	1	69%
Balancing personal and professional lives	2	44%
Keeping current with medical literature	3	83%
Dealing with death/suffering of patients	4	63%
Delivering bad news to patients	5 (tie)	63%
Mastering knowledge of the specialty	5 (tie)	91%
Governmental and insurance reimbursement issues	7	16%
Sleep deprivation	9	73%
Administrative duties/office management	10	40%
Finding meaning in work	11	82%
Working with secretarial/administrative staff	12	72%
Applying for/maintaining grant support	14	51%
Academic pressure to publish	15	64%
Financial pressure caused by student loan debt	16	67%

NCCTG = North Central Cancer Treatment Group

STEP 3: NURTURING PERSONAL WELLNESS ACTIVITIES

True balance includes being attentive to personal needs as well as the needs of family and patients. Once physicians arrive home from work, spending time with family, paying bills, and performing household chores often absorb the remaining hours and leave little time for personal reflection, hobbies, exercise, interests, and spiritual practice. Neglecting these activities leads to loss of perspective, physical health, and personal growth.

Ironically, attention to adequate sleep, exercise, nutrition, and regular medical care often are neglected by physicians, who daily counsel patients on the importance of these habits. Establishing a personal primary care physician and developing a strategy for regular exercise and nutrition that can be shared with other members of the family (evening walks, hiking, sporting events with children, etc.) can be a practical place to begin. The concept of flow may be applied to personal activities as well. Sports, the arts, and other hobbies provide ready opportunities for individuals to experience challenge, interest, and growth.

Religious/spiritual practice may provide perspective and purpose and is cited as a critical component of well-being by many physicians [39], including oncologists [15, 29]. Taking time to reflect on the personal impact of the strength, suffering,

and courage witnessed in the daily practice of oncology also may provide oncologists with opportunities to process their grief and affirm the noble and praiseworthy characteristics of the human spirit [28]. The ideal frequency of such reflection varies for each physician, but professionals should consider taking time for such reflection at least monthly (Table 2).

Recommendations for Fellowship Programs

As a result of the aging of the US population, the next several decades are likely to be a time of increased demand for oncologists. Maintaining an adequate oncology workforce will require not only training enough oncologists but preventing the premature attrition of those already in practice [24]. In addition to training physicians in disease management, fellowship programs have a responsibility to help fellows develop the habits and skills necessary to prepare them for the challenges that they will face in practice and that may immunize against burnout.

Being the frequent bearers of bad news, supervising toxic treatment, and caring for patients with unsolvable disease-related complications are constant sources of stress for oncologists [23, 27, 29, 43]. Oncology fellows often receive little training regarding how to manage these chal-

Table 4**Proposed Changes in Fellowship Curriculum to Enhance Training**

PROPOSED CHANGE	ONCOLOGISTS WHO WOULD ENCOURAGE FELLOWSHIP PROGRAMS TO DEVELOP SUCH A CHANGE (N=137)
Additional curriculum on end-of-life care/delivering "bad news"	95%
Additional curriculum on governmental/insurance reimbursement issues	80%
Periodic small group meetings for debriefing/sharing with other fellows	79%
Periodic small group meetings to discuss patient death/suffering	79%
Additional curriculum on job-life balance	73%
Additional curriculum on office management	73%
Additional curriculum on applying for and maintaining grant support	64%
Periodic small group meetings with a psychiatrist to discuss stress	38%

Meaning, Balance, and Satisfaction

allenges. One informal survey found less than 20% of oncologists received formal education in the basic communication tasks required of oncologists, such as delivering "bad news" and discussing the transition from active treatment to palliative care [43]. Other investigators reported that although 89% of cancer clinicians considered themselves adequately trained in disease management, only half believed they were adequately trained in such communication skills [23]. Importantly, adequate mastery of these professional skills appears to have a profound impact on oncologists' personal wellness [15, 23]. Physicians who consider themselves inadequately trained experience significantly more distress, have low-

er satisfaction with work, and are at higher risk for burnout than are those who believe they were adequately prepared [17, 23, 26].

In our recent study of NCCTG oncologists [15], a subgroup of responders subjectively rated the adequacy of their fellowship training in a variety of areas. Large numbers of oncologists considered themselves inadequately trained in tasks frequently rated as the greatest sources of stress for oncologists (Table 3). When considered with other reports [17, 23, 26], these observations suggest that gaps in training may contribute to oncologist burnout and that improving fellowship curriculum in specific areas (ie, communication skills) may promote better quality of life for both physicians and patients. Recommended changes in fellowship curriculum to enhance training as suggested by practicing oncologists are presented in Table 4. Educational research to enhance the quality of training in some of these areas is underway and should be of particular interest to fellowship program directors [46, 47].

Conclusion

The practice of oncology provides opportunities for both great distress and great satisfaction. Debunking the myth that "things will get better" and focusing on optimizing present circumstances are essential steps to achieving personal well-being. Identifying and acting on life values, maximizing the aspects of work that are the most personally meaningful, and nurturing activities that foster personal wellness can help oncologists achieve satisfaction in the personal and professional spheres of their lives.

References

- Perry M, Osborne W. Health and wellness in residents who matriculate into physician training programs. *Am J Obstet Gynecol* 2003;189:679-683.
- Ball S, Bax B. Self-care in medical education: effectiveness of health-habits interventions for first-year medical students. *Acad Med* 2002;77:911-917.
- Davis BE, Nelson DB, Sahler OJ, et al. Do clerkship experiences affect medical students' attitudes toward chronically ill patients? *Acad Med* 2001;76:815-820.
- Griffith C, Wilson J. The loss of idealism throughout internship. *Eval Health Prof* 2003;26:415-426.
- Griffith C, Wilson J. The loss of student idealism in the 3rd-year clinical clerkships. *Eval Health Prof* 2001;24:61-71.
- Shanafelt TD, Bradley KA, Wipf JE, Back AL. Burnout and self-reported patient care in an internal medicine residency program. *Ann Intern Med* 2002;136:358-367.
- Stress and impairment during residency training: strategies for reduction, identification, and management. Resident Services Committee, Association of Program Directors in Internal Medicine. *Ann Intern Med* 1988;109:154-161.
- Collier VU, McCue JD, Markus A, Smith L. Stress in medical residency: status quo after a decade of reform? *Ann Intern Med* 2002;136:384-390.
- Colford JM Jr, McPhee SJ. The ravelled sleeve of care: managing the stresses of residency training. *JAMA* 1989;261:889-893.
- Bellini LM, Baime M, Shea JA. Variation of mood and empathy during internship. *JAMA* 2002;287:3143-3146.
- Smith JW, Denny WF, Witzke DB. Emotional impairment in internal medicine house staff: results of a national survey. *JAMA* 1986;255:1155-1158.
- Hsu K, Marshall V. Prevalence of depression and distress in a large sample of Canadian residents, interns, and fellows. *Am J Psychiatry* 1987;144:1561-1566.
- Myers MF. The well-being of physician relationships. *West J Med* 2001;174:30-33.
- McAuliffe WE, Rohman M, Santangelo S, et al. Psychoactive drug use among practicing physicians and medical students. *N Engl J Med* 1986;315:805-810.
- Shanafelt T, Novotny P, Johnson ME, et al. The well-being and personal wellness promotion practices of medical oncologists in the North Central Cancer Treatment Group. *Oncology* 2005. In press.
- Landon BE, Reschovsky J, Blumenthal D.

Changes in career satisfaction among primary care and specialist physicians, 1997-2001. *JAMA* 2003;289:442-449.

17. Ramirez A, Graham J, Richards MA, Cull A, Gregory WM. Mental health of hospital consultants: the effects of stress and satisfaction at work. *Lancet* 1996;347:724-728.

18. Spickard A Jr, Gabbe SG, Christensen JF. Mid-career burnout in generalist and specialist physicians. *JAMA* 2002;288:1447-1450.

19. Geurts S, Rutte C, Peeters M. Antecedents and consequences of work-home interference among medical residents. *Soc Sci Med* 1999;48:1135-1148.

20. Linzer M, Visser MR, Oort FJ, et al. Predicting and preventing physician burnout: results from the United States and the Netherlands. *Am J Med* 2001;111:170-175.

21. Warde CM, Moonesinghe K, Allen W, Gelberg L. Marital and parental satisfaction of married physicians with children. *J Gen Intern Med* 1999;14:157-165.

22. Whippen DA, Canellos GP. Burnout syndrome in the practice of oncology: results of a random survey of 1,000 oncologists. *J Clin Oncol* 1991;9:1916-1920.

23. Ramirez AJ, Graham J, Richards MA, et al. Burnout and psychiatric disorder among cancer clinicians. *Br J Cancer* 1995;71:1263-1269.

24. Grunfeld E, Whelan TJ, Zitzelsberger L, et al. Cancer care workers in Ontario: prevalence of burnout, job stress, and job satisfaction. *CMAJ* 2000;163:166-169.

25. Maslach C, Jackson S, Leiter M. *Maslach Burnout Inventory Manual*. 3rd ed. Palo Alto, CA: Consulting Psychologists Press; 1996.

26. Graham J, Ramirez AJ, Cull A, et al. Job stress and satisfaction among palliative physicians. *Palliat Med* 1996;10:185-194.

27. Cherny N, Catane R. Attitudes of medical

oncologists toward palliative care for patients with advanced and incurable cancer: report on a survey by the European Society of Medical Oncology Taskforce on Palliative and Supportive Care. *Cancer* 2003;98:2502-2510.

28. Shanafelt T, Adjei AA, Meyskens FL. When your favorite patient relapses: physician grief and well-being in the practice of oncology. *J Clin Oncol* 2003;21:2616-2619.

29. Kash KM, Holland JC, Breitbart W, et al. Stress and burnout in oncology. *Oncology (Huntingt)* 2000;14:1621-1634; 1636-1637.

30. Catalan J, Burgess A, Pergami A, et al. The psychological impact on staff of caring for people with serious diseases: the case of HIV infection and oncology. *J Psychosom Res* 1996;40:425-435.

31. Meier DE, Back AL, Morrison RS. The inner life of physicians and care of the seriously ill. *JAMA* 2001;286:3007-3014.

32. Barni S, Mondin R, Nazzani R, Archili C. Oncostress: evaluation of burnout in Lombardy. *Tumori* 1996;82:85-92.

33. Linzer M, Konrad TR, Douglas J, et al. Managed care, time pressure, and physician job satisfaction: results from the physician worklife study. *J Gen Intern Med* 2000;15:441-450.

34. Frank E, McMurray JE, Linzer M, Elon L. Career satisfaction of US women physicians: results from the Women Physicians' Health Study. Society of General Internal Medicine Career Satisfaction Study Group. *Arch Intern Med* 1999;159:1417-1426.

35. Stoddard JJ, Hargraves JL, Reed M, Vratil A. Managed care, professional autonomy, and income: effects on physician career satisfaction. *J Gen Intern Med* 2001;16:675-684.

36. Lemkau J, Rafferty J, Gordon R Jr. Burnout and career-choice regret among family practice physicians

in early practice. *Fam Pract Res J* 1994;14:213-222.

37. Shanafelt T, Sloan J, Habermann T. The well-being of physicians. *Am J Med* 2003;114:513-517.

38. Quill TE, Williamson PR. Healthy approaches to physician stress. *Arch Intern Med* 1990;150:1857-1861.

39. Weiner EL, Swain GR, Wolf B, Gottlieb M. A qualitative study of physicians' own wellness-promotion practices. *West J Med* 2001;174:19-23.

40. Clever LH. A checklist for making good choices in trying-or tranquil-times. *West J Med* 2001;174:41-43.

41. Visser MR, Smets EM, Oort FJ, De Haes HC. Stress, satisfaction and burnout among Dutch medical specialists. *CMAJ* 2003;168:271-275.

42. Massimini F, Delle Fave A. Individual development in a bio-cultural perspective. *Am Psychol* 2000;55:24-33.

43. Baile WF, Buckman R, Lenzi R, et al. SPIKES—A six-step protocol for delivering bad news: application to the patient with cancer. *Oncologist* 2000;5:302-311.

44. Novack DH, Suchman AL, Clark W, et al. Calibrating the physician: personal awareness and effective patient care. Working Group on Promoting Physician Personal Awareness, American Academy on Physician and Patient. *JAMA* 1997;278:502-509.

45. Rabow MW, McPhee SJ. Doctoring to Heal: fostering well-being among physicians through personal reflection. *West J Med* 2001;174:66-69.

46. Back AL, Arnold RM, Tulsy JA, Baile WF, Fryer-Edwards KA. Teaching communication skills to medical oncology fellows. *J Clin Oncol* 2003;21:2433-2436.

47. Sekeres MA, Chernoff M Jr, Lynch TJ, Kasendorf EI, Lasser DH, Greenberg DB. The impact of a physician awareness group and the first year of training on hematology-oncology fellows. *J Clin Oncol* 2003;21:3676-3682.