

# HOT SPOT

The Newsletter of the Rapid Response Radiotherapy Program  
of the Odette Cancer Centre

 **Sunnybrook**  
ODETTE CANCER CENTRE  
A Cancer Care Ontario Partner



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## Editorial

By Dr. Edward Chow

Ms. Christina Crowe discusses “Burnout in oncology: Risk, coping and prevention”, Ms. Molly Gao and Dr. Marissa Slaven describe “Best practices in children’s bereavement: A qualitative analysis of needs and services”. In another real patient story

“Mine alone”, Fiona Alberti, a Patient and Family Advisor, shares her story with six different interprofessional groups and disease sites together with Ms. Manisha Gandhi and Ms. Anya Todic. Upcoming events and courses are outlined in Continuing Medical Education. Dr.

Parneet K. Cheema in the insert provides “Update on Lux Lung 7: Afatinib versus Gefitinib for first-line treatment of advanced/metastatic EGFR positive non-small cell lung cancer.” We hope you will enjoy the newsletter.

## Burnout in oncology: Risk, coping and prevention

By Christina Crowe, HBSc, MA Counselling Psych,  
Registered Psychotherapist (Q)

The focus of a health care professional’s career is to care for other people. Over a lifetime, this often occurs at the expense of the physician’s or nurse’s own physical and mental health. An increased collective awareness about mental health leads us to the question, who is taking care of those who take care of us?

Oncology health care professionals have been shown to be at a greater risk for burnout, in part due to the complex and challenging nature of the clinical work, and also in part due to the high rates of patient death. One thing new and current oncology physicians have to figure out is how to do their jobs efficiently, accurately and with as much compassion as possible and also cope in a healthy manner with their emotions each time they lose a patient to cancer. Studies have shown caregivers (both at home and in the clinic) supporting cancer patients feel they can’t show

negative emotions as frequently as they normally would, yet, at the same time, they are expected to show understanding and express sympathy to the patient.<sup>1</sup>

### What is ‘burnout’?

Burnout is a slow-developing, stress-related syndrome, characterized by the following symptoms: high emotional exhaustion, high depersonalization and reduced personal accomplishment. In medical school students, burnout presents similarly as high emotional exhaustion, high cynicism, and also low academic efficacy. Medical school students with emotional exhaustion report feeling totally drained of all emotional resources, have a detached attitude toward their learning and start to feel incompetent.<sup>2</sup> Many health care professionals fail to recognize

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the signs of burnout in themselves, potentially because they are simply too focused on caring for others.

Some common questions a health care provider can ask himself or herself upon reflection include:

- Do you care less about work, or dread going to work?
- Are you anxious, irritable or snapping at your colleagues?
- Do you feel disengaged, or have a loss of passion for what you were once passionate about?

Some of the issues oncology professionals face include serious work overload (large patient volumes, insufficient resources, or poorly managed centres) and a lack of control over their work environment. Women physicians have a tougher time, and working alone in a solo practice and being young are also higher risk factors. Studies have shown some of the things that help to buffer against burnout include being married and having children, which suggests the importance of having healthy, supportive relationships.<sup>3</sup>

Traditionally, medical and popular culture view a patient's death as physician failure, and it's no different in oncology. In addition to the intensity of the clinical challenges oncology professionals encounter, as well as facing a higher frequency of patient death, there are other complex issues that must be dealt with on a regular basis. End-of-life concerns often require confronting one's own belief system, facing resistance from patients and their families, colleagues, and also their own institutional culture. Physicians find themselves with the inability to act in a manner consistent with their personal and professional values due to institutional or other constraints, and also suffer compassion fatigue, marked by diminished emotional energy needed to care for patients.<sup>4</sup>

## How do oncology professionals cope?

In Ontario, 20 oncologists were interviewed at three hospitals exploring what coping strategies they used to deal with burnout and grief. The results

showed they engaged in various rituals, including meeting with families, participating in bereavement rituals within their centre, and making a phone call or sending a condolence card to the family. Specific coping strategies they reported using included social support, activity-oriented coping (such as exercise), turning to faith, compartmentalization, and also withdrawing from patients and families. There is no question these oncologists grieved for their patients. However, the ability to demonstrate that grief or find good coping strategies may still be needed.<sup>3</sup> More often than not, a busy day might get in the way, and at least a third of medical, radiation and surgical oncologists surveyed in Canada never participate in any of these practices.<sup>5</sup>

As previously noted in studies with oncology professionals, burnout syndrome was described by three main dimensions (also called *Maslach's dimensions*): emotional exhaustion, depersonalization and low personal accomplishment.<sup>2,8</sup> Maslach details components of these further as:

- Exhaustion: feeling over-extended, both emotionally and physically.
- Cynicism: taking a cold, cynical attitude toward responsibilities.
- Ineffectiveness: when people feel ineffective, they feel a growing sense of inadequacy.

Oncologists have self-reported rates of emotional exhaustion as high as 69%.<sup>4</sup> This warrants our attention because physicians with burnout are also at risk for making more clinical errors and showing poorer clinical judgment. A study from the Netherlands, surveying more than 2,000 medical residents and physicians, found burnout does, in fact, impact patient care. Residents and physicians used the Maslach Burnout Inventory-Health and Social Services scale, and the Utrecht Work Engagement Scale and self-assessed patient care practices. The results of this survey showed:

- 94% of the residents reported making one or more mistakes without negative consequences for the patient during their training.
- 71% reported performing procedures for which they did not feel properly trained.

- More than half (56%) of the residents stated they had made a mistake with a negative consequence.
- 76% felt they had fallen short in the quality of care they provided on at least one occasion.
- Men reported more errors in action/judgment than women. Significant effects of specialty and clinical setting were found on both types of errors.
- Residents with burnout reported significantly more errors ( $p < 0.001$ ).<sup>6</sup>

## How do we move from coping to self-care for health care providers?

"Self-care is a spectrum of knowledge, skills, and attitudes including self-reflection and self-awareness, identification and prevention of burnout, appropriate professional boundaries, and grief and bereavement."<sup>7</sup>

Unfortunately, there are not any mandatory courses on self-care or wellness management in Canadian medical schools. Where there have been wellness courses, they are student-led and elective. However, there are validated strategies that can be used and sometimes stating the obvious is important.

Health care providers can also reference the *Vanderbilt University Wellness Wheel* to improve job satisfaction and overall well-being, reducing the likelihood of stress and burnout. Some of these strategies for personal self-care include:

- prioritizing close relationships such as those with family
- ensuring adequate sleep
- regular exercise
- time for vacations
- fostering recreational activities and hobbies
- practising mindfulness and meditation, and pursuing spiritual development.<sup>8</sup>

Many health care providers do not automatically include self-care activities in their lives. However, they can reach out for psychoeducation from a qualified therapist or seek support from their colleagues, and investigate what kinds of programs they might be able to set up

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in their institution. Self-care skills are strategies everyone can learn, and have proven benefits, including decreasing the impairment from burnout, compassion fatigue, and moral distress. It also encourages personal and professional well-being, job engagement, compassion satisfaction and resilience.<sup>4</sup> In fact, many physicians and nurses may be practising some of these skills and not specially identifying it as 'self-care'.

The bottom line is oncology care professionals are people, too. Doctors and nurses, pharmacists, social workers and cancer care navigators are all also deeply affected by the nature of the work in cancer care. Supporting all medical professionals to do the job they have been trained to do is a worthwhile pursuit. Support can be found in many places, whether it's within

one's own cancer centre, religious/faith community, social community or with a professional therapist and, ultimately, might improve patient care.

### REFERENCES

1. Kovács M. Is emotional dissonance more prevalent in oncology care? Emotion work, burnout and coping. *Psychooncology* 2010;19(8):855-62.
2. Pagnin D, et al. Burnout and career choice motivation in medical students. *Med Teacher* 2013;35(5):388-94.
3. Granek L. Oncologists' protocol and coping strategies in dealing with patient loss. *Death Stud* 2013;37(10):937-52.
4. Sanchez-Reilly S, Morrison LJ, Carey E, Bernacki R, O'Neill L, Kapo J, et al. Caring for oneself to care for others: physicians and their self-care. *J Support Oncol* 2013;11(2):75-81.
5. Chau NG, et al. Bereavement practices of physicians in oncology and palliative care. *Arch Intern Med* 2009; 169(10):963-71.
6. Prins JT, et al. Burnout, engagement and resident physicians' self-reported errors. *Psychol Health Med* 2009;14(6):654-66.
7. Richards KC, et al. Self-care and well-being in mental health professionals: The mediating effects of self-awareness and mindfulness. *J Ment Health Couns* 2010;32(3):247-64.
8. Trufelli D, et al. Burnout in cancer professionals: a systematic review and meta-analysis. *Eur J Cancer Care* 2008;17(6):524-31.
9. Vanderbilt.edu. Wellness wheel. Wellness Center, Vanderbilt University, 2015 URL: <http://www.vanderbilt.edu/recreationandwellnesscenter/wellness/wellness-wheel>

## Best practices in children's bereavement: A qualitative analysis of needs and services

By Molly Gao, BSc, Honours Candidate, and Marissa Slaven, MD, Assistant Clinical Professor, McMaster University  
[marissa.slaven@hhsc.ca](mailto:marissa.slaven@hhsc.ca)

*"Children grieve at any age. As soon as they can love, they can grieve."*

The quote above reveals the pervasiveness of children's grief, spanning from birth to adulthood. Children experience grief, sadness, and despair following parental death [1]. Furthermore, losing a family member profoundly taxes the family's existing coping systems [2]. These variegated effects of loss lead to the question: What are the needs of grieving children and how can we best support them? To elaborate on existing knowledge, we interviewed bereavement specialists in the local community.

We used purposeful sampling techniques to choose experts to interview. We recruited experts from diverse backgrounds to offer a wide range of perspectives regarding children's grief. Experts included child grief counsellors, social workers, and directors of children's bereavement organizations. Our theoretical sampling was an iterative process. We analyzed the interview transcripts using the constant-comparative method until we reached a saturated thematic framework of children's grief.

### Unique aspects of children's grief

#### 1) "Grief puddles"

Experts noted that children grieve in short spurts. The metaphor of "grief puddles" describes this behaviour, in which children jump into the puddle one moment and experience grief, and jump out the next moment and return to their daily activities. As such, adults may witness children transitioning from deep sorrow to laughter sporadically and within a short period of time.

#### 2) Grieving at each developmental stage and milestone

Children's understanding of death changes as they age. Young children may have a magical understanding of death (e.g., thinking their deceased parent will come back to life). As children age and develop abstract capacities to understand the causality and permanence of death, they may experience feelings of loss again. Children may also experience a loss at each milestone.

#### 3) "The parentified child"

Sometimes, children are afraid to express sadness in fear of exacerbating

their caregiver's grief. Children may try to constantly console their parents, often at the expense of addressing their own grief. One expert notes, "If children constantly try to console, they cannot make space to fall apart themselves."

To ameliorate this, experts suggest open communication and encourage parents to seek support services for themselves so they can continue parenting positively.

### Recommended practices for helping bereaved children

#### 1) Avoiding euphemisms

Naming the illness and using proper medical terminology ("tumour," "cancer," "dying", etc.) is vital. Experts caution against using euphemisms ("passed away," "bump on the head", "sick", etc.), as they often confuse children. For example, children who are told that their terminally ill parent is "sick" may believe that this parent will recover. When the parent dies, the child may begin to fear getting sick themselves and worry that they may die the next time they are sick.

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### 2) Peer support with other bereaved children

Experts cautioned that bereaved children often feel isolated. At school, they are often the only one of their peers to have experienced a loss. Peer support groups can be a safe space for bereaved children to share their similar experiences, helping them feel less isolated and misunderstood. It is fruitful to consider the Bereaved Families of Ontario's motto: "the bereaved helping the bereaved." This illuminates a powerful idea: that bereaved people can empower each other through their shared experiences.

### 3) Therapies in addition to one-on-one counselling and psychotherapy

Practices in addition to one-on-one counselling include bibliotherapy, music therapy, and play therapy. Play therapy was most commonly recommended by experts. Because children are naturally inclined towards play, art, or music, among others, these therapies provide an accessible way for children to share their feelings. One expert notes, "Through these practices, children can express themselves and their grief without having to name or worry about it. This takes pressure off of the child."

### 4) Big Brother/ Big Sister programs

Experts noted that families find it difficult to adjust to new roles and family dynamics. Children may face an identity issue, as their roles change. Many experts suggested a "surrogate" in the form of a Big Brother or Big Sister volunteer to help the child reconnect with a particular gender and give the surviving caregiver a break.

### 5) Education to medical providers and advocacy of bereavement services

Experts suggested more extensive grief education to healthcare providers. Experts also encouraged collaboration between bereavement workers and the medical community, as healthcare providers often serve as the gatekeepers to accessing services. Healthcare providers can encourage patients to seek out bereavement services as a meaningful part of care for themselves and their children.

### 6) Non-grief-related activities

While it is, indeed, important for bereaved children to confront their loss, it is also important to partake in non-grief-related activities. Because coping with death in the family is emotionally demanding, non-

grief activities can provide a respite from having to focus on grief. Activities like family sports or arts and crafts are meant to be fun and help the child maintain a healthy balance between confronting their grief and taking a break from it.

## Conclusions

Some of the experts' recommendations are more feasible than others. Families can reasonably incorporate using proper medical terminology and avoiding euphemisms in explaining death to their children. However, establishing formal death education for medical providers may be a timely and complicated process. Despite these limitations, both literature and experts concur on a few feasible practices, like having children join peer support groups and partake in alternative therapies. While purposeful sampling led to a diverse framework of children's grief, it is unlikely that all bereavement specialists would concur with its recommendations.

## REFERENCES

1. Dowdney L. Childhood bereavement following parental death. *Journal of Child Psychology and Psychiatry*. 2000;41(7):819–830.
2. Zambelli GC, DeRosa AP. Bereavement support groups for school-age children: Theory, intervention, and case example. *American Journal of Orthopsychiatry*. 1992;62(4):484–93.
3. Riely M. Facilitating children's grief. *The Journal of School Nursing*. 2003;19(4):212–218.
4. Sandler IN. Family bereavement program (FBP) approach to promoting resilience following the death of a parent. *Family science*. 2013;4(1):87–94.
5. Stroebe M. The dual process model of coping with bereavement: A decade on. *OMEGA-Journal of Death and Dying*. 2010;61(4):273–289.
6. Eakes GG. Middle-Range theory of chronic sorrow. *Image: The Journal of Nursing Scholarship*. 1998;30(2):179–184.
7. Metel M. Peer-group support for bereaved children: A qualitative interview study. *Child and Adolescent Mental Health*. 2011;16(4):201–207.
8. Wilkinson S. Are we getting it right? Parents' perceptions of hospice child bereavement support services. *Palliative Medicine*. 2007;21(5):401–407.
9. Cunningham B. Essential elements of a teacher in-service program on child bereavement. *Elementary School Guidance & Counseling*. 1989.
10. Stokes J. The challenge of evaluating a child bereavement programme. *Palliative Medicine*. 1997;11(3):179–190.
11. Curtis K. Do community-based support services benefit bereaved children? A review of empirical evidence. *Child: Care, Health and Development*. 2001;27(6):487–495.
12. Haine R. Evidence-based practices for parentally bereaved children and their families. *Professional Psychology: Research and Practice*. 2008;39(2):113.
13. Melhem NM. Grief in children and adolescents bereaved by sudden parental death. *Archives of general psychiatry*. 2011;68(9):911–919.
14. Sandler IN. Long-term effects of the family bereavement program on multiple indicators of grief in parentally bereaved children and adolescents. *Journal of Consulting and Clinical Psychology*. 2010;78(2):131.
15. Berns CF. Bibliotherapy: Using books to help bereaved children. *OMEGA-Journal of Death and Dying*. 2004;48(4):321–336.
16. Sandler IN. The family bereavement program: Efficacy evaluation of a theory-based prevention program for parentally bereaved children and adolescents. *Journal of consulting and clinical psychology*. (2003;71(3):587.
17. Rosner R. A meta-analysis of interventions for bereaved children and adolescents. *Death Studies* 2010;34(2):99–136.
18. Saldinger A. Meeting the needs of parentally bereaved children: A framework for child-centered parenting. *Psychiatry*. 2004;67(4):331–352.
19. Dopp A. The role of peer relationships in parental bereavement during childhood and adolescence. *Death Studies*. 2012;36(1):41–60.
20. Callanan MA. Diversity in children's understanding of death. *Monographs of the Society for Research in Child Development*. 2014;79(1):142–150.
21. Way P. A practitioner's view of children making spiritual meanings in bereavement. *Journal of Social Work in End-of-Life & Palliative Care*. 2013;9(2-3):144–157.



# A patient story: Mine alone

By Fiona Alberti, Patient and Family Advisor on the Supportive Care Working Group, Manisha Gandhi, MBA, Manager of Patient and Family Support Program, and Anya Todic, MBA Candidate, Odette Cancer Centre, Sunnybrook Health Sciences Centre

In December 2001, I was diagnosed with Pseudo Myxoma Peritonei. By the time I was done with surgery more had been taken out of my abdominal cavity than was left behind.

On January 11, 2002, after 17 hours in the OR with my doctor, I was left with half of my stomach, my small bowel, my liver, pancreas, bladder, and kidneys. After two months of recovery I went through five rounds of chemo. In January I had walked into Sunnybrook a high-energy, fit, athletic 135-pound young woman. In August I walked out of the Odette a 108-pound weakling. My body had been saved, but my life had been forever altered.

Pre-cancer I walked everywhere, ran, did two-hour Muay Thai classes, and had just started sword fighting. Post treatment it was an effort to walk two blocks. Eating had been a joy—a high-fibre, low-fat, plenty of chocolate diet. With changes to both ends of my digestive system, eating became highly regimented and inevitably meant taking a 45-minute rest after every meal to get over the nausea.

I gradually adapted to the changes and after 18 months off I returned to my job as an elementary school teacher. I was given lots of positive encouragement from everyone around me so I figured I was just fine. I am very strong willed and pretty self-aware. I come from a family where you are just expected to get on with things. I have almost never lost hope or my sense of humour through all of this so why would I need help?

After being hospitalized with bacterial meningitis and septic arthritis and acquiring two new doctors I began to realize that I felt like a collection of unrelated body parts. I asked for someone to talk to.

I saw a psychologist briefly, but we parted ways when I told him I had to have a second surgery and he asked “What does that make you think?” Stupid question in my opinion. I saw a psychiatrist for an even briefer period of time before my third surgery. The psychiatrist told me I was sarcastic and angry, two things I already knew. Talking was just not helping.

In retrospect I realize these appointments probably didn't work because I couldn't articulate what I needed. I didn't want someone to help me analyze my deep feelings. I wasn't depressed or sad,

I wanted someone who could help me adjust to the new me. I have always had high expectations for myself and my body could no longer keep up with my energizer bunny brain. On a daily basis I would have lists of what I wanted to get done based on my pre-surgery life, but when you lose anywhere from 45 minutes to 2 or 3 hours a day to nausea and, in general, are just more tired, it is impossible to accomplish what had been possible before. I was continually frustrated by my inability to get things done. I needed someone to help me accept my new limitations and adjust my expectations.

I had surgery number four in summer 2014 and decided I didn't want to rush back to work. I have finally accepted that my illness is incurable and progressive. My doctor again suggested I see a psychiatrist. He mentioned there was one on staff I hadn't seen yet and he thought our personalities would be a good match. With some trepidation I agreed. Well, third time lucky. I will not be walking out on this one. I have found a safe place to be.

After two years on long-term disability I have once again returned to work. It was not an easy decision to make. I know that the stress of my job may well exacerbate the cancer in my abdomen and send me back to the OR. Although I had the final say, the decision was only made after deep discussions with my psychiatrist. I would not have had the courage to go back if I didn't know I had somewhere to go when the bad overwhelms the good. Knowing there is someone there to help me deal with my demons means I can focus on living my life rather than worrying about what is yet to come. I can look after my 20 students on a daily basis knowing that I have an emotional safety net.

Timing and match are crucial. If a patient hasn't had success with a particular service, don't be afraid to recommend they try again. I'm really glad that my care team didn't stop trying to recommend patient and family supportive care services to me.

## About the author

Fiona Alberti is a Patient and Family Advisor and has played a pivotal role in the PFS Roadshows at Odette, sharing her story with six different interprofessional groups and disease sites.

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Founders: Dr. L. Andersson, Dr. C. Danjoux

Editor: Dr. E. Chow

Associate Editor: Dr. C. Danjoux

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Editorial and Financial Manager: Ms. T. Rodin

Odette Cancer Centre, Sunnybrook Health Sciences Centre, 2075 Bayview Avenue, Toronto, ON M4N 3M5

Tel: 416-480-4974, Fax: 416-480-6002

E-mail: [toby.rodin@sunnybrook.ca](mailto:toby.rodin@sunnybrook.ca)

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# Continuing Medical Education

By Patrick Paladino and Toby Rodin

- **November 25, 2016.** Best of Oncology East. Westin Harbour Castle, Toronto, Ontario. <http://www.oncologyeducation.com/events/upcoming-events/best-of-oncology-east-2016/conference-home/>
- **November 22–December 1, 2016.** Radiological Society of North America (RSNA) 102nd Scientific Assembly and Annual Meeting. Chicago, IL. [http://www.rsna.org/Annual\\_Meeting.aspx](http://www.rsna.org/Annual_Meeting.aspx)
- **December 3–6, 2016.** American Society of Hematology Annual Meeting, San Diego, California <http://www.hematology.org/Annual-Meeting/> <http://www.oncologyex.com/meetings/conferences.html>
- **December 4–7, 2016.** World Conference on Lung Cancer, International Association for the Study of Lung Cancer. Vienna, Austria. <http://www.oncologyex.com/meetings/conferences.html>
- **December 6–10, 2016.** 39th Annual San Antonio Breast Cancer Symposium 2016. San Antonio, TX. <https://www.sabcs.org/>
- **January 13, 2017.** Best of SABCS. Parkview Manor, Toronto, Ontario. <http://www.oncologyeducation.com/events/upcoming-events/bo-sabcs-toronto-2017/conference-home/>
- **January 27–28, 2017.** Cancer Survivorship Symposium: Advancing Care and Research. <http://survivorsym.org/>
- **January 27–30, 2017.** The European Cancer Congress. Amsterdam, The Netherlands. <https://www.ecco-org.eu/Events/ECCO2017>
- **February 2–5, 2017.** 11th Annual Canadian Melanoma Conference: Research Frontiers. Westin Whistler, Whistler, British Columbia. <http://www.oncologyeducation.com/events/upcoming-events/11th-canadian-melanoma-conference/>

- **Feb 16–18, 2017.** 2017 Genitourinary Cancers Symposium. Orlando, FL. <http://gucasym.org/past-and-future-meetings-2>
- **February 15–18, 2017.** American Psychosocial Oncology Society (APOS) Annual Conference. Orlando, Florida. <http://www.apos-society.org/2016>
- **February 23–24, 2017.** Best of Oncology West. Paramount Pacific Rim, Vancouver, BC. <http://www.oncologyeducation.com/events/upcoming-events/best-of-oncology-west-2017/conference-home>

## CME COURSES

### NEW ACCREDITED COURSE AVAILABLE: Optimizing Outcomes in Advanced Prostate Cancer

This course will review the clinical implications of prostate cancer heterogeneity, data on sequencing drugs in mCRPC, and will also focus on recent CRPC guidelines and advanced hormone-sensitive disease. *This event is an Accredited Group Learning Activity (Section 1) as defined by the Maintenance of Certification program of the Royal College of Physicians and Surgeons of Canada. This activity was approved by the Canadian Society of Internal Medicine for a maximum of 1.5 hours.* Through an agreement between the Royal College of Physicians and Surgeons of Canada and the American Medical Association, physicians may convert Royal College MOC credits to AMA PRA Category 1 Credits™. Information on the process to convert Royal College MOC credit to AMA credit can be found at [www.ama-assn.org/go/internationalcme](http://www.ama-assn.org/go/internationalcme). **This course is accredited until June 15, 2017.**

<http://www.oncologyeducation.com/events/cmecourses/currently-accredited-courses/optimizing-outcomes-in-advanced-prostate-cancer/>

### NEW ACCREDITED COURSE AVAILABLE: Targeted Therapies in the Management of Non-Small Cell Lung Cancer: A Multi-Disciplinary Approach

The multi-disciplinary approach to this course provides discussion on an array of topics and perspectives related to NSCLC management including diagnosis, various treatment options and pertinent case studies. As a result, this course is relevant to a variety of oncology healthcare providers. *This event is an Accredited Group Learning Activity (Section 1) as defined by the Maintenance of Certification program of the Royal College of Physicians and Surgeons of Canada. This activity was approved by the Canadian Society of Internal Medicine for a maximum of 2 hours.* Through an agreement between the Royal College of Physicians and Surgeons of Canada and the American Medical Association, physicians may convert Royal College MOC credits to AMA PRA Category 1 Credits™. Information on the process to convert Royal College MOC credit to AMA credit can be found at [www.ama-assn.org/go/internationalcme](http://www.ama-assn.org/go/internationalcme). **This course is accredited until May 11, 2017.**

<http://www.oncologyeducation.com/events/cmecourses/currently-accredited-courses/targeted-therapies-in-the-management-of-non-small-cell-lung-cancer/>

# Update on Lux Lung 7: Afatinib versus Gefitinib for first-line treatment of advanced/metastatic EGFR positive non-small cell lung cancer

HOT SPOT

By Dr. Parneet K. Cheema, HBSc, MD, MBiotech, FRCPC, Medical Oncologist, Sunnybrook Odette Cancer Centre

## Introduction

- An EGFR TKI is the recommended first-line treatment for patients with advanced EGFR positive NSCLC.<sup>1</sup>
- Gefitinib and erlotinib are first generation EGFR TKIs that have shown to improve progressions-free survival (PFS) and overall response (ORR) compared to platinum doublet.<sup>2</sup>
- Afatinib, an irreversible ErbB family blocker, is a second generation EGFR TKI that has shown to improve PFS and ORR and, in a pooled analysis, improved overall survival (OS) compared to first-line platinum doublet.<sup>3</sup>
- Lux Lung 7 is the first prospective randomized trial comparing a first and second generation EGFR TKI as first-line systemic therapy for EGFR positive NSCLC.<sup>4,5</sup>

## Study design

- Randomized, phase IIb, afatinib 40 mg po OD versus gefitinib 250 mg po OD in treatment naïve advanced EGFR positive (common mutations) NSCLC.
- Co-primary endpoints were PFS, time to treatment failure (time to discontinuation by all cause) (TTF), and OS.

## Results (from primary analysis)

- Afatinib significantly improved PFS compared to gefitinib (median 11.0 mos with afatinib vs 10.9 mos with gefitinib; HR 0.73,  $p=0.017$ ) and improved ORR (70% versus 58%;  $p=0.0083$ ).
  - PFS/ORR by genotype
    - Deletion 19: PFS: HR 0.76,  $p=0.107$ , ORR: 73% vs 66%
    - L858R: PFS: HR 0.71,  $p=0.85$ , ORR: 66% vs 42%
  - PFS with afatinib was consistent across pre-defined clinical subgroups, including age, sex and race.
- There was a significant improvement in median TTF (13.7 mos with afatinib vs 11.5 mos with gefitinib; HR 0.73,  $p=0.0073$ ).
- Toxicity: Afatinib was associated with increased grade 3/4 diarrhea, rash, paronychia, stomatitis and fatigue, whereas gefitinib had increased rates of transaminitis. Dose reductions due to adverse events (AEs) occurred in 42% of patients with afatinib; gefitinib has a fixed dose and, thus, is not able to directly compare effect of AEs leading to dose reductions. However, despite the difference in AEs, the rate of discontinuation was low at 6% in both arms.
- Dose reductions of afatinib due to AEs did not impact the PFS.
  - Patients who were dose reduced (<40 mg po OD): PFS 12.8 mos
  - Patients who were maintained full dose: PFS 11 mos, HR 1.34
  - Despite increased toxicity with afatinib, PROs were similar with afatinib and gefitinib.

## ESMO 2016 update – Mature OS data

- Update with a median follow-up of 42.6 mos.
- Previously reported PFS, TTF and ORR were maintained with further follow-up.
- There was a numerical trend of improved median OS with afatinib that did not reach statistical significance and this trend was also found among the two common genotypes.
- Median OS of afatinib vs gefitinib: 27.9 vs 24.3 mos; HR 0.86,  $p=0.258$ 
  - Deletion 19: 30.7 vs 26.4 mos; HR 0.83
  - L858R: 25.0 vs 21.2 mos; HR 0.91
  - Sub analysis showed no difference in median OS with afatinib according to age including patients who were  $\geq 75$ .
- Subsequent therapies: 14 and 15% of patients received a third generation EGFR TKI in the afatinib and gefitinib arms, respectively.

## Impact on practice

Lux Lung 7 is currently the only reported prospective head-to-head comparison of EGFR TKIs as first-line therapy for advanced EGFR-positive NSCLC. This update confirms the improvement of PFS and ORR with afatinib compared to gefitinib. The PFS advantage with afatinib becomes more pronounced over time, with separation of PFS curve after one year. The delayed benefit of afatinib is hypothesized to be due to delayed onset of resistance mechanisms. Although OS was not significantly different between the arms, there was a consistent trend of ~3-month improvement in OS with afatinib across both common genotypes. Gefitinib and afatinib both remain valid options for patients with EGFR-positive NSCLC. The clinical benefits of afatinib

need to be weighed with the increased toxicity seen with afatinib and, thus, performance status, comorbidities and compliance need to be factored into the selection of EGFR TKI. However, the discontinuation rate with afatinib was low, indicating that toxicity was manageable. To optimize therapy with afatinib at the Sunnybrook Odette Cancer Centre, Toronto, we have undertaken a multidisciplinary proactive call back protocol to manage our patients on afatinib.

## References

1. Master GA, Temin S, Azzoli CG, et al. Systemic therapy for stage IV non-small-cell lung cancer: American Society of Clinical Oncology clinical practice guideline update. *J Clin Oncol*. 2015;33:3488.
2. Mok T, Wu Y-L, et al. Gefitinib or Carboplatin–Paclitaxel in Pulmonary Adenocarcinoma. *N Engl J Med*. 2009;361:947–957.
3. Yang JC, Wu Y-L, et al. Afatinib versus cisplatin-based chemotherapy for EGFR mutation-positive lung adenocarcinoma (LUX-Lung 3 and LUX-Lung 6): Analysis of overall survival data from two randomised, phase 3 trials. *Lancet Oncol*. 2015;16:141–51.
4. Park K, Tan E-H, et al. Afatinib versus gefitinib as first-line treatment of patients with EGFR mutation-positive non-small-cell lung cancer (LUX-Lung 7): A phase 2B, open-label, randomised controlled trial. *Lancet Oncol*. 2016;17(5):577–589.
5. Paz-Ares L, et al. Afatinib (A) vs gefitinib (G) in patients (pts) with EGFR mutation-positive (EGFRm+) non-small-cell lung cancer (NSCLC): overall survival (OS) data from the phase IIb trial LUX-Lung 7 (LL7). Abstract #LBA43, ESMO 2016, Copenhagen, Denmark.

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