HOT SPOT

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

Sunnybrook ODETTE CANCER CENTRE

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Editorial

By May Tsao, MD, FRCP(C)

In this informative issue of **Hot Spot**, "cutting edge" advanced radiation techniques, namely stereotactic body radiosurgery for spine and stereotactic body radiotherapy for lung are highlighted by Drs. Arjun Sahgal and Patrick Cheung. In Dr. Peter Selby's insert, tips on smoking cessation are summarized. Dr. Philip Hébert's article raises important issues relating to disclosure and palliative chemotherapy. Drs. Sahgal, Michael Fehlings, Edward Chow, Joel Finkelstein and Ms. Aimee Gallant outline the study on determining outcomes for patients with metastatic epidural spinal cord compression (MESCC): a quality of life and cost-effectiveness study. We would also like to thank Dr. Michele Chaban for her article on psychosocial aspects in oncology and Dr. Ewa Szumacher for listing upcoming CME events in palliative medicine.

Hope you find this issue of **Hot Spot** interesting and useful.

Spine stereotactic body radiotherapy

By Arjun Sahgal, MD, Sunnybrook Odette Cancer Centre and the Princess Margaret Hospital, University of Toronto, Department of Radiation Oncology

The traditional way of treating symptomatic spine metastases has been with large field radiation treating the entire diseased vertebra, and typically treating one or two vertebral bodies above and below the disease. This is demonstrated in Figure One. The left panel shows an axial CT slice where the entire diseased vertebrae are within the radiation field, and the centre panel shows a saggital CT slice indicating the radiation field encompassing two vertebral bodies above and below the disease. This practice ensures that the disease is not missed due to limitations in imaging and localization. Furthermore, this technique is safe, although the volume of normal tissue irradiated is large, as toxicities have not been significant due to the low biologic effective doses used. As a result, large field radiation for spine metastases has been the standard approach with outcomes of ~30% complete pain response and ~70% any response.

The main limitation to the dose prescribed with traditional radiation techniques has been the spinal cord. Overdosing the spinal cord has the devastating consequence of radiation-induced myelopathy that can leave the patient paralyzed. Clinical trials looking at the impact of high doses for spine metastases were, therefore, not possible due to limitations in technology preventing safe high-dose therapy.

With the advent of new radiation technologies that allow for intensity modulated radiotherapy, spine SBRT has emerged. The principle is to deliver high biologic effective doses to only the disease within the vertebra with the aim to cause tumour regression with hopefully permanent local control. The new technology allows for the radiation dose to conform away from the spinal cord and, even though high doses are delivered to the tumour, the spinal cord receives below toxicity threshold dose. An example of a spine SBRT distribution is present in Figure One, right panel. Here, this axial CT slice shows the tumour within the transverse process (highlighted in blue colour wash) treated alone, while the rest of the vertebral body is spared radiation. The purple line represents the treatment dose of 16 Gy, and the spinal cord is spared the high dose, as the 10 Gy line (orange) is shaped away from

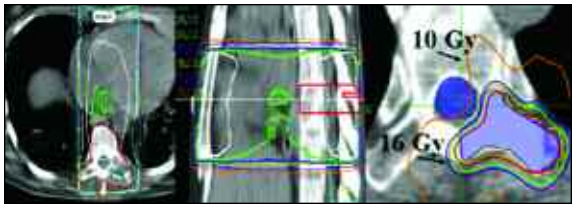

Figure One.

continued on page 2…

In this issue of HOT SPOT:

Spine stereotactic body radiotherapy

Stereotactic body radiation therapy for lung tumours

Disclosure and palliative chemotherapy

Determining outcomes for patients with metastatic epidural spinal cord compression (MESCC): A quality of life and cost-effectiveness study

Bringing about change

Continuing Medical Education

Inserts:
Smoking cessation and reduction in patients with cancers

Stereotactic body radiation therapy for lung tumours

By Patrick Cheung, MD, FRCPC, Department of Radiation Oncology, Sunnybrook Odette Cancer Centre, University of Toronto

Stereotactic body radiation therapy (SBRT) is an exciting new treatment approach for tumours that is based broadly on the principles of classic stereotactic radiosurgery for brain tumours. In essence, it is a high-precision radiotherapy technique that allows for the delivery of very high ablative doses of radiation to the target with significant sparing of adjacent structures. There is a growing body of literature supporting the use of SBRT in tumours of the lung, spine, and liver. For lung tumours, SBRT is most commonly used in the setting of early stage peripherally located non-small cell lung cancer (NSCLC) or solitary pulmonary metastasis from other primary malignancies without metastatic involvement of the hilar or mediastinal lymph nodes. Like surgical resection, the goal of SBRT is to *eradicate* the treated tumour with high probability. Unlike conventional radical radiotherapy where small doses of radiation are delivered *daily over four to seven weeks*, SBRT is often delivered in just *three to four days over a two-week period*. The most commonly prescribed SBRT schemes in the world for lung tumours are 48 Gy in four fractions or 60 Gy in three fractions.

The majority of patients who are referred for lung SBRT are those with peripherally located T1-T3 N0 M0 NSCLC who are *inoperable* due to medical comorbidity/old age, or those who prefer a nonsurgical approach. Results from multiple retrospective and prospective studies in the medical literature indicate local control rates approaching 80% to 90% in those patients treated with adequate doses of SBRT, which is similar to local control rates reported with surgical resection. Multicentre prospective studies are either completed and awaiting results or ongoing throughout the world to further clarify the long-term results of this new treatment strategy. In the Netherlands, a randomized study comparing upfront SBRT to surgical resection for patients with *operable* early stage NSCLC is open to accrual.

Despite the very high doses of radiation being delivered with SBRT, acute radiation toxicity is minimal (transient fatigue, dry cough, and radiation dermatitis are the most common) because the treatment volumes generally are very small and there is no elective nodal irradiation performed for these early stage tumours. Late pulmonary toxicities have also been reported to be very minor, even in patients with very compromised pulmonary function. One possible late toxicity is radiation-induced rib fracture in those patients whose treated tumour was adjacent to or involving the chest wall. Care must be taken when selecting patients for lung SBRT to ensure that critical organs like the brachial plexus, spinal cord, esophagus, trachea/mainstem bronchi, and heart do not receive the very high ablative radiation doses used in SBRT.

The radiation simulation and treatment process for SBRT is also far more complex when compared to conventional radical radiotherapy for lung cancer. After consultation with the radiation oncologist, the next step is to perform four-dimensional computed tomography (4D-CT) simulation for radiation treatment planning. Simply put, 4D-CT allows for accurate localization of the lung tumour during all phases of the breathing cycle, which is critical for such a high-precision treatment like SBRT. Another important aspect is daily image guidance during the treatment process to ensure the patient (and tumour) is in the proper position. Prior to each treatment, cone-beam CT is performed on the treatment machine to verify the tumour position. The final aspect is reproducible immobilization of the patient during the

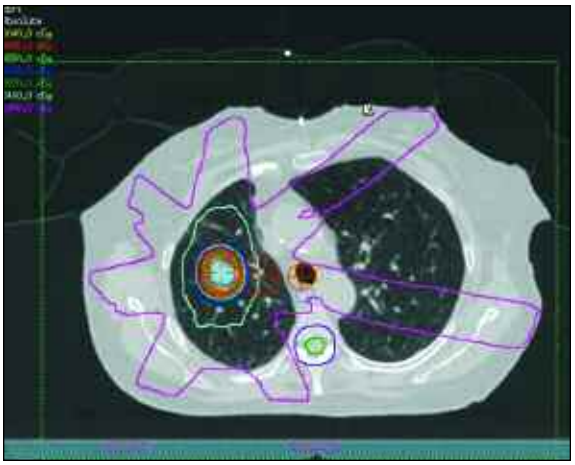

Figure One.

Spine stereotactic body radiotherapy

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the majority of the spinal cord contour. The dose of 16 Gy in one fraction represents twice the dose of a typical conventional palliative regimen of 8 Gy.

The process of planning and delivering spine SBRT is arduous on the patient and, therefore, the appropriate patient needs to be well selected for this aggressive treatment. Patients need to tolerate being immobilized using the Elekta Bodyfix® system, which allows for near-rigid positioning on a day-to-day basis. Furthermore, the treatment is longer than traditional techniques lasting from 30 minutes to 45 minutes as opposed to five to 10 minutes. The technology used at the University of Toronto comprises the Elekta Synergy® Unit. This unit has an on-board cone beam unit allowing for a rapid focused CT scan just prior to radiation delivery. This cone-beam CT serves to ensure that the radiation is being delivered precisely by verifying the position of the target in three dimensions. As we get better with our ability to shape radiation, it becomes imperative that we are delivering the dose accurately, especially when we are delivering high doses next to critical organs. A study by the University of California, San Francisco, reported that even 1 mm to 2 mm patient movements during treatment can lead to a change in the expected spinal cord dose by up to 5%. Such an overdosage could tip a patient into receiving a spinal cord dose beyond tolerance.

Another advantage for spine SBRT is in the treatment of patients who have failed prior radiation, and the tumour is either causing pain or progressing to cause malignant epidural spinal cord compression. Traditional radiation does not allow for high doses to be delivered for a second time. Spine SBRT, however, allows for high doses to still be delivered while the spinal cord is kept to a safe dose. This has been studied, and preliminary results are encouraging indicating high efficacy with no permanent toxicity.

This technique is currently investigational and data are evolving to determine what the role is for this technique and who best to use it on. Even though we are able to deliver high doses, there is no evidence to suggest better outcomes over traditional external beam radiation, which is the standard of care. At the University of Toronto, a Phase 2 research study is in the process of being initiated to study spine SBRT for metastases in a systematic fash-

treatment. Unlike conventional radical radiotherapy, where each day of radiation takes only 10 to 20 minutes, lung SBRT can often take anywhere between 30 and 60 minutes for each treatment. As such, a "body mold" is created for the patient to ensure that the patient stays in the same position during the treatment delivery.

SBRT is now a treatment option for patients with lung tumours at both the Sunnybrook Odette Cancer Centre and Princess Margaret Hospital. At Sunnybrook, treatment is delivered in four days, over a two-week period.

Current indications for lung SBRT at Sunnybrook include:

- Patients with peripherally located T1-T3 N0 M0 NSCLC who are medically inoperable or prefer a non-surgical approach.
- Patients with peripherally located solitary (or a few) pulmonary metastases from a solid tumour with no evidence of disease beyond the thorax who are medically inoperable or prefer a non-surgical approach. Like resection of pulmonary metastases, the number of pulmonary metastases that one would accept for treatment is controversial, recognizing that these patients ultimately have metastatic disease.

If you have a patient who you want to refer for lung SBRT at the Sunnybrook Odette Cancer Centre, indicate on the standard referral sheet "lung SBRT", and fax it to 416-480-6179. For physician inquiries about lung SBRT, please call Dr. Patrick Cheung at 416-480-6165.

ion. The patients best for this technique are those with good performance status, oligometastatic disease, and stable pain such that they can wait one to two weeks in order to start treatment.

Suitable patients should be referred to Dr. Sahgal by their own radiation oncologists. If there are none, then refer directly to Dr. Sahgal at both cancer centres.

If you have a patient who you want to refer for spine SBRT at the Sunnybrook Odette Cancer Centre, indicate on the standard referral sheet for Dr. Sahgal CNS spine SBRT, and fax it to 416-480-6179. For referrals to the Princess Margaret Hospital, please fax referrals to 416-946-2127, attn: Julie Muller and state for Dr. Sahgal CNS spine SBRT. For physician inquiries about lung SBRT, please call Dr. Arjun Sahgal at 416-903-0456.

Disclosure and palliative chemotherapy

By Philip Hébert, MD, PhD, FCFPC, Chair SHSC REB

A recent research paper in the **British Medical Journal** shed some new light on an old problem. How much information should we share with incurable cancer patients who are candidates for some kind of chemotherapy?

Here is a typical case: A 73-year-old male presented last year with a hepatic tumour. Initially regressing following several treatment regimens, his illness has now spread beyond the liver capsule. He has agreed to another round of chemotherapy and is also planning an extended vacation outside Canada. Asked by his family doctor how he will do so far away, he explains the oncologists had told him some time ago that the spread of the tumour was to be 'expected' and he wasn't worried about it.

This case raises several issues such as how cancer patients cope with their illness as it progresses, how they incorporate new information that seems not so positive, and how much responsibility doctors have in ensuring patients are 'properly informed'. Does appropriate consent, such as in this case, require making sure the patient fully knows how grim things are, or does it allow for some deference to a more optimistic interpretation of events?

In the **BMJ** study (Audrey, Abel, Blazeby, Falk, & Campbell. [2008]. What oncologists tell patients about survival benefits of palliative chemotherapy and implications of informed consent: qualitative study. **BMJ, 337**, a752), 37 patients in the U.K. with a variety of advanced cancers and nine oncologists were observed and digitally recorded during the first hospital consultations in which patients were told their cancer was incurable. All the patients were also told that the object of further treatment was to 'slow' or control the tumour's growth and/or to enable the patient to feel as well as possible for as long as possible. One object of the consultation was to make a decision about further active treatment.

What is remarkable is how little concrete information about the actual survivable benefits of chemotherapy was given to patients. Most consultations (26/37) made no or vague reference to such survival benefits. While a few made reference to numerical data ("four weeks"), most mentioned vague gains ("may buy you some time"). Survival benefits (or the lack thereof) were triggered by the patient asking a direct question, or if the patient wanted a reason to refuse treatment. They were also triggered if the oncologist wanted to justify non-treatment or wanted to encourage realistic expectations. Vague or no discussion was prompted by those patients who presumed lengthy survival, who did not want treatment, who did not want to know, or if the oncologists decided they were too unwell to tolerate chemotherapy.

Studies reveal that doctors generally do not rise to the information standards patients expect. Patients want information from physicians even if they cannot 'do' anything with that information. Physicians tend to be more 'end-sensitive'—imparting information if it might make a positive difference for decision-making, withholding it if it will not do so, or if it might harm a patient. Patients, however, may want information not primarily for decision-making, but to know who they are and what the future may hold for them. It is patients who are responsible for the lives they lead and without critical information—such as that about illness prognosis and the survival benefits of treatment—they may be unable to make sense of their lives and achieve meaningful goals as their lives come to an end.

These studies are limited by the complex interplay of personal factors and knowledge fallibility. Patients do not always want all the gory and grim information about their illness, physicians may be reluctant to probe patient defences in the light of irrecoverable illness, and the limitations of medical knowledge may prevent easy and accurate prognostications.

What should be done in the case with which we began? We need to know what the patient understands about his situation and what he sees or hopes about the future. When the clinicians told him this was 'to be expected', did he understand that to mean not to worry, that this was a mere temporary uptick of his illness, or did he appreciate that this was and is an ominous new phase leading to his decline and death in several months? Does he understand that during his vacation he might die or does he assume all will be well? All this discussion must be undertaken with the clinician being sensitive to this patient's informational wishes and needs. As has been said, the truth may be brutal, the telling of it need not be.

The second edition of Dr Hébert's book, ***Doing Right: A Practical Guide to Medical Ethics****, was published by Oxford University Press in October 2008.*

Determining outcomes for patients with metastatic epidural spinal cord compression (MESCC): A quality of life and cost-effectiveness study

By Arjun Sahgal, MD, Department of Radiation Oncology, Sunnybrook Odette Cancer Centre, University of Toronto, Aimee Gallant, BSc, Department of Orthopedics, Sunnybrook Odette Cancer Centre, University of Toronto, Michael Fehlings, MD, PhD, Department of Neurosurgery, Toronto Western Hospital, University Health Network, University of Toronto, Edward Chow, MBBS, PhD, Department of Radiation Oncology, Sunnybrook Odette Cancer Centre, University of Toronto, and Joel Finkelstein, MD, Department of Orthopedics, Sunnybrook Odette Cancer Centre, University of Toronto

MESCC represents a devastating progression of spine metastases where patients often have back pain and neurologic compromise that typically includes leg weakness, sensory loss, and bladder and bowel dysfunction. It is defined radiologically by compression of the dural sac and its contents by an extradural tumour mass (Loblaw, Perry, Chambers, et al., 2005). The minimum radiologic evidence for cord compression is indentation of the thecal sac at the level of clinical features (Loblaw, Perry, Chambers, et al.).

Patients with MESCC are often at the end stage of their lives, and the treatment of MESCC typically has been relegated to short-course palliative radiation. The aim of radiation treatment has been to reduce the patient's pain, and hopefully reverse neurologic dysfunction.

Table One.

Inclusion Criteria:
- Solitary level of MESCC as confirmed by MRI (other spine metastases may be present, but cord compression caused at only one area of the spinal cord)
- Age>18

Exclusion:
- More than two symptomatic spine metastases
- Primary cancer of the central nervous system (e.g., ependymoma or chordoma)
- Cauda Equina Syndrome and not Spinal Cord Compression (i.e., compression below L2)
- Radio-sensitive histology (e.g., lymphoma, multiple myeloma)
- Radio-resistant histology (e.g., sarcoma)

Surgery has typically been reserved for radiation failures, or when the tumour causes rapidly evolving neurologic deficits.

A major shift in the treatment of MESCC has arisen due to the publication of the randomized study by Patchell et al., where 102 patients with MESCC were randomized to either radiation alone or combined therapy with surgery plus post-operative radiation (Patchell, Tibbs, Regine, et al., 2005). This landmark study reported several important outcomes suggesting a major benefit to the combination of surgery (direct circumferential decompression) and post-operative radiation, as first line treatment for selected patients with MESCC (Patchell, Tibbs, Regine, et al.). For example, patients treated with combined therapy retained the ability to walk for 122 days, as opposed to 13 days (p=0.003) with radiation alone (Patchell, Tibbs, Regine, et al.). Furthermore, of 32 patients who were unable to walk for no more than 48 hours prior to study entry, 62% of those treated with combined therapy, as opposed to 19% of patients treated with radiation alone, regained the ability to walk (Patchell, Tibbs, Regine, et al.). Other important endpoints were significantly better with surgery plus radiation, for example: maintenance of continence and overall survival (Patchell, Tibbs, Regine, et al.).

Given these data, there has been a shift in the treatment approach for patients with MESCC. Although some of the hard outcomes are reported in the Patchell study, like neurologic status and survival, data describing the quality of life and cost-effectiveness of this aggressive management option are largely unknown. Direct circumferential surgery is a major operation and requires rehabilitation post-op as opposed to radiation, which is non-invasive and lasts only five to 10 days.

Therefore, the Sunnybrook Odette Cancer Centre is participating in a University of Toronto-led multicentre North American study (principal investigator, Dr. Michael Fehlings, Toronto Western Hospital) investigating quality of life and cost outcomes for patients with MESCC. Patients treated with either radiation or surgery plus post-operative radiation are invited to participate in this study. Essentially, patients are asked a series of questionnaires aimed at determining quality of life, pain relief, neurologic status, and survival with a cost-effectiveness analysis once the trial has completed accrual. The major inclusion and exclusion criteria are provided in Table One. Hopefully this study will answer the question if aggressive upfront surgical therapy for palliative patients with MESCC truly benefits the patient's quality of life. It is quality of life that is of paramount importance for a patient who is faced with the end of their life.

References

Loblaw, D.A., Perry, J., Chambers, A., et al. (2005). Systematic review of the diagnosis and management of malignant extradural spinal cord compression: The Cancer Care Ontario Practice Guidelines Initiative's Neuro-Oncology Disease Site Group. **J Clin Oncol, 23**, 2028–2037.

Patchell, R.A., Tibbs, P.A., Regine, W.F., et al. (2005). Direct decompressive surgical resection in the treatment of spinal cord compression caused by metastatic cancer: A randomized trial. **Lancet, 366**, 643–648.

Bringing about change

By Michele Chaban, MSW, RSW, PhD

The world in which we live is changing in so many ways. It is difficult to keep up with all that is happening in the north, east, west and south (news). Change unfolding on distant horizons surely does affect our lives. It seems that for all that we know, there is more that we do not know—and have yet to discover. It also seems that dramatic change may take place over lifetimes or even in an instant.

In time past, the treatment of cancer rested primarily on a three-pronged anti-disease approach that included: surgery, radiation and chemotherapy (SRC). Supporting this core approach were inter-professional (IP) teams largely available to help people take these treatments. As IP teams increasingly developed their expertise in this field, we came to realize there were core elements of living that promoted health, now embodied in the social determinants of health (Health Canada). Health care trialed qualitative and quantitative research, both of which held a promise of more effective intervention results. Once an island in a single stream of proof, scientific methods cross-fertilized with other disciplinary streams (e.g., mindfulness meditation). Similarly, other disciplines began to inform and dialogue with science to understand the essence of humanness, rather than function (**The Spiritual Brain**, Beauregard and O'Leary). In the mélange of disciplinary sharing, inter-professional practice was spawned.

Historically, SRC primarily targeted the disease of cancer; IP teams also recognize that cancer impacts on the whole person and the whole family. Inter-professional advocacy and care plans became a norm. For all that has been realized, there is still much to be done in how we approach care.

Can we foresee a future when health care will shift again, from disease focus to person-centred and then again from individuals to families. Can we bear even greater shifts in our approaches to care? Will we access and utilize aspects of ourselves that promote health equal to the offers of SRC? Will one discipline listen and learn from another equally, rather than trying to replicate, mimic or compete with collegial expertise? Will we realize the greatest resource that the health care system has is its own people who make up the teams and organizations that provide care? Will organizations begin to equally promote another level of health for teams, so that care delivered to our patients/families is enhanced by healthy rather than depleted teams? This is easier said and claimed than accomplished.

Realistically, how can we promote the health of all involved in care when the needs are so diverse? Is one component of the care system, whether that is patients, families, teams and/or communities of care, more or less important than another? Is one part of us more or less expendable?

If we approach health care from complex systems theory, rather than a disease model, our priorities in health care naturally change. Then, it goes without saying that if we do not care for our team's health, they will have less to offer to those patients, families and communities in our care. Promoting health in the whole of the health care system seems daunting. Again, a shift in perspective would have us viewing these needs as complementary rather than competing, as an untapped health care resource that will enhance what and how we deliver services.

Education of individuals and family members, which includes a realistic understanding of the disease, its behaviour and its treatment helps establish grounded expectations for our clients and families. It allows for balancing of health care and family routines, occupational, social and recreational roles. This is a multisystemic approach to health and healing.

Health promoting counsel on intra- and inter-personal dynamics allows those affected by cancer to bear the bio-psycho-social-spiritual hurdles with more understanding, agility and compassion. Counsel on exercise, energy conservation and pain/symptom management encourages capacity, etc. Accessing this information as a matter of course, rather than awaiting a crisis to develop, can enhance a family's resiliency, encouraging them to be less dependent and more inter-dependent with the health care system in the future. Further encouragement of both those who give and receive care to achieve their own levels of wellness every day, in every way, allows everyone to support the primary goal of achieving balance, promoting mind, body and spiritual health. These interventions re-enforce the importance of whole person and whole system care whose momentum is realized in comprehensive interventions and aspects of healing (to make whole), even when someone is ill or dying.

Understandings of healing, health, wholeness may have to be revised as disease advances, and end of life is near. However, people report that as they focus on healing, rather than cure alone, they inevitably have success, they have a diverse array of areas to work with rather than their disease alone. Interventions that emphasize health and healing shift the focus to the larger systems such as values, beliefs, nourishing of many kinds, feelings, family relationships, meaning making and spiritual deepening. With healing as an emphasis rather than cure while applying complex systems theory to our care, perhaps we will achieve greater health in our systems of care. Then, we will be even more abundant in healing and health resources.

About the author

Michele Chaban, MSW, RSW, PhD, currently teaches at University of Toronto and is a PhD supervisor at University of Wales. She participates in a group private practice that cares for the ill, the disabled, the dying and the living through habitathealing.com. Habitat Healing holds a partnership with Hospice Toronto.

Continuing Medical Education 2008

By Ewa Szumacher, MD, MEd, FRCP(C)

Continuing Medical Education (CME) can update health care professionals on the latest advances for modifications to their clinical practice. At the request of the CME organizers, Hot Spot will list the national and international CME activities in palliative medicine that are of interest to our readers. Please kindly forward details of the CME activities to: **Ewa.Szumacher@sunnybrook.ca**

- November 12, 2008–6th Annual Innovations in Palliative Care, McMaster University, Hamilton, Ontario. Contact: Angela Silla, (905) 525-9140 Ext 26327; **silla@mcmaster.ca**
- November 13–15, 2008–From Concept to Critical Mass: Building & Sustaining Today's Palliative Care Program, Hilton DFW Lakes Executive Conference Centre, Grapevine, Texas, (212) 201-2680; **capcevents@mssm.edu**
- November 22, 2008–14th Annual Conference: The Science & Art of Pain and Symptom Management, University of Toronto, Toronto, Ontario, (416) 978-2719, Toll Free (888) 512-8173; **help-ONC0802@cmetoronto.ca http://events.cmetoronto.ca/website/index/ONC0802**
- February 27–28, 2009–Seventh International Symposium on Supportive Care in Oncology: Cancer Management in the Era of Targeted Agents, The Ritz-Carlton New York, Battery Park, New York, NY, Physicians' Education Resource, (888) 949-0045; **cme@pergroup.com; http://www.cancerlearning.com/index.cfm/fuseaction/conference.showOverview/id/5/conference_id/53**
- March 5–7, 2009–Palliative Medicine & Supportive Oncology Symposium 2009—13th Annual International Symposium, Hyatt Regency Bonaventure; Fort Lauderdale, Florida, Contact: T. Myles, (800) 238-6750; **http://www.ccfcme.org/pm09**
- March 6–9, 2009–6th Annual Toronto Radiation Medicine Conference, Old Mill Inn, Toronto, Ontario, Contact: Amanda Bolderston, (416) 946-4501 ext. 4857; **amanda.bolderston@rmp.uhn.on.ca; www.radmedtoronto.com**
- March 13–16, 2009–5th World Congress World Institute of Pain—WIP 2009, New York, NY, (336) 714-8385; **dianne.willard@worldinstituteofpain.org http://www2.kenes.com/wip/Pages/home.aspx**
- April 27–June 24, 2009–Certificate in Essential Palliative Care, Esher, Birmingham, Belfast, Ireland, Contact: Mrs Catherine Hazell; **catherine-hazell@pah.org.uk www.pah.org.uk/education**
- May 3, 2009–2009 Hike for Hospice Palliative Care Canada, Contact: Linda Truglia—Canadian Hospice Palliative Care Association, (800) 668-2785; **ltruglia@scohs.on.ca**
- May 3–9, 2009–2009 National Hospice Palliative Care Week Canada; **http://www.chpca.net/events/nhpc_week.htm**
- May 7–10, 2009–11th Congress of the European Association for Palliative Care, Vienna, Austria; **http://www.eapcnet.org/Vienna2009/**
- September 24–27, 2009–International Conference on Cultural Connections for Quality Care at the End of Life, Perth, Western Australia; **http://www.conlog.com.au/palliativecare2009/**
- October 18–21, 2009–2009 Canadian Hospice Palliative Care Conference, Winnipeg, Manitoba; **http://www.chpca.net/events/calendar_of_events.htm#oct09**
- February 11–14, 2010–IXVII International Conference of Palliative Care of IAPC, Trichirappalli, Tamilnadu, India, Contact: Dr. T. Mohanasundaram; **drmohs.trichy@hotmail.com**

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