Canadian Lung Cancer Conference 2019

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ABSTRACT

The 19th Canadian Lung Cancer Conference took place 7–8 February 2019 in Vancouver, British Columbia. This annual interdisciplinary education event attracted participants from throughout Canada to review the latest advances in lung cancer care and to learn from world-renowned experts in the field. The highlights of this year’s conference were perspectives about biomarkers for immunotherapy, approaches to oligoprogressive disease, and caregiver burnout.

Key Words  Canadian Lung Cancer Conference, clcco, lung cancer

INTRODUCTION

The 19th Canadian Lung Cancer Conference (clcco) took place 7–8 February 2019 in Vancouver, British Columbia. The conference is an annual national meeting that aims to support professional development and to improve the care of lung cancer patients across Canada through interdisciplinary education.

With multiple key clinical trials having reported in 2018, there was much to reflect on and to integrate into national practice moving forward. The conference was also a fantastic opportunity to collaborate and review the lung cancer research agenda.

PROGRAM

Training in Lung Cancer

Kicking off the conference was the Training in Lung Cancer (tlc) session, chaired by Drs. Randeep Sangha and Devin Schellenberg. A unique and intimate program, the tlc is tailored specifically for trainees with an interest in lung cancer and consists of a variety of topics presented by experts in surgical, radiation, and medical oncology.

This year, Dr. Simon Turner opened the tlc with an overview of important surgical principles for early-stage non-small-cell lung cancer (nsclc), providing the audience with memorable nuggets of information to take away. The program then moved on to a whistle-stop tour of the evolution of advanced nsclc treatments, presented by Dr. Jeff Rothenstein. The first radiation oncology session from Dr. Daniel Gomez provided a fascinating perspective on consolidative treatment for oligometastatic disease. Dr. Jason Pantarotto updated the audience on the latest management of lung cancer brain metastases with stereotactic body radiation therapy (sbrt). Dr. Anthony Brade discussed morbidity after lung radiotherapy (rt), including a recap of potential markers of cardiac toxicity. To conclude the tlc session, Dr. Hatim Karachiwala presented an enlightening and entertaining discussion about the use of technology in oncology care (#clcco).

Multidisciplinary Sessions

After an inspiring welcome from Dr. Barbara Melosky encouraging everyone that “no patient should be left behind” as lung cancer care evolves, the conference officially opened with the fantastic Canadian best-selling author and top-rated inspirational ted speaker, Neil Pasricha. Through his personal challenges, he has researched and developed strategies to maximize happiness. He humorously highlighted small changes that we all could use to increase our happiness and to make our work lives more productive.

The main conference began with a succinct update of the lung cancer research landscape across Canada from Dr. Penelope Bradbury. Her presentation emphasized nationwide cooperation, led by the Canadian Cancer Trials Group, to bring new treatments to lung cancer patients.

The medical oncology keynote address from Dr. David Gandara then followed, presenting a fascinating perspective on recent therapeutic advances and biomarker development for immunotherapy, including current initiatives to harmonize methods of assessing tumour mutational burden. He also provided a timely reminder that the patient’s condition and the financial cost of immunotherapeutics mandates the identification of patient populations who will not benefit as much from those therapies.

Dr. Benoit Samson then succinctly summarized the Canadian perspective on recent and imminent developments in lung cancer, focusing on implementation of...
screening in Canada and the current state of public funding for immunotherapy and targeted therapies. Screening in the future could include circulating tumour DNA and low-dose computed tomography, and Samson reminded the audience of the importance of ongoing efforts to prevent smoking in young adults. He concluded with a reminder that implementing immunotherapy could increase treatment uptake nationwide, leading to new challenges in integrating those agents into lung cancer care.

Dr. Fiona McDonald gave the radiation oncology keynote presentation titled “How Does Radiation Fit In with Evolving Systemic Anticancer Therapies?” What followed was an enlightening overview of the evolving role of systemic anticancer therapies and RT in NSCLC, raising the important question of whether a more radical approach to halt as the sine kinase inhibitors and immunotherapy. Key trials such as the HALT randomized controlled trial of sbrt therapy in mutation-positive NSCLC with oligoprogression (currently recruiting) were discussed. Many intriguing questions remain unanswered: the optimal sequence of RT and immunotherapy to enhance tumour-specific immunity and thus “prime” the immune system, the role of biomarkers to help select patients who might benefit from combination therapy, and the combinations of systemic anticancer therapies that should be avoided with sbrt. McDonald finished by emphasizing the need for efficient trial design, including the importance of translational endpoints and multicentre collaboration, to further advance this field.

Dr. Max Diehn then followed by describing some of the exciting contributions that circulating tumour DNA sequencing can bring to lung cancer management and the data that show the power of this technology to monitor minimal residual disease and detect early relapse in the adjuvant setting. He recapped published data from a 40-patient cohort demonstrating that every patient with detectable circulating tumour DNA after adjuvant lung cancer treatment went on to relapse. Future applications of circulating tumour DNA might include using it as a measure of radiosensitivity and to prognosticate after adjuvant therapy.

Dr. Graham Warren led the respiratory session with a spirited reflection on the critical importance of smoking cessation for oncology patients and the professional responsibility of those in lung cancer care to fully support that agenda. He discussed various models for integrating smoking cessation into oncology care and how three key screening questions will capture almost all the patients who require referral to cessation services. He also presented in vitro data demonstrating the effect of chronic smoking and smoking cessation on the efficacy of chemotherapy and radiation, further supporting the pan-Canadian vision to support every patient with cancer to quit smoking.

The meeting then focused on early-stage lung cancer, with a case-oriented presentation by Dr. Marcelo Cypel reviewing the role of thoracoscopic surgery now that sbrt is widely available. He presented the data succinctly and concluded that deciding best management involves multiple considerations and that surgery is important in invasive staging and recurrence after sbrt. Combination treatment might also be acceptable for synchronous primary lesions.

Dr. Martin Chasen then followed with a discussion of patient-reported outcome measures in lung cancer—a key topic, because the integration of patient and public views is becoming increasingly important in all aspects of lung cancer care delivery. The morning sessions ended on a high note with the presentation of the Lifetime Achievement Award to Dr. Suzanne Kamel-Reid by Dr. Ming Tsao, who reflected on Kamel-Reid’s many accomplishments in establishing molecular diagnostics in Canada and her collaborative and enthusiastic approach to her work throughout her career.

### Breakout Sessions

The radiation oncology breakout showcased the latest evidence for radiotherapy as a consolidative treatment in synchronous oligometastatic NSCLC (Dr. Daniel Gomez) or in the setting of metachronous oligorecurrent disease per the NCT01725165 and sabr-COMET trials (Dr. David Palma). The lively discussion that followed raised questions including the implication of those trial results in the immunotherapy era. Palma and Dr. Fiona McDonald further discussed the trial landscape in Canada and the United Kingdom, emphasizing again the importance of supporting randomized controlled trials. Dr. Greg Videtic’s talk sparked a discussion about how real-time quality assurance and peer review of a patient’s sbrt plans and treatment differ between centres.

The nursing breakout focused on two topical areas in Canadian cancer care: compassion fatigue and cannabis use. Recognition of the scale of caregiver burnout is increasing, and implementation of strategies to prevent compassion fatigue will be key to maintaining the level of lung cancer care that can be provided in an increasingly complex therapeutic environment. Cannabis use, accompanied by various therapeutic assertions, is not infrequent in the cancer patient population, and the update for frontline staff with a précis of the currently available data was well received.

Novel gene fusions in NSCLC was the theme for the medical oncology breakout. Dr. David Hong gave a thorough overview of NTRK fusions and targeted drug development thus far, a unique program that has been developed simultaneously in adult and pediatric cancer populations. The estimated incidence is up to 3% in lung cancers, and these NTRK fusions occur in a non-smoking patient population, similar to the lung cancers that harbour ALK fusions. Drs. Brandon Sheffield and Parneet Cheema gave pathologic and clinical perspectives about patients with NRG1 fusion—positive lung cancer. That gene fusion is thus far seen in mucinous lung adenocarcinoma and has been shown in case reports to respond to the pan-HER inhibitor afatinib. Both gene fusions affect a small fraction of patients seen in lung cancer clinics, but present potential new therapeutic targets. Translating testing to a wider patient population could, however, be a challenge, and exploring tests such as ntrk immunohistochemistry might make widespread testing more feasible.

The session concluded with two interesting perspectives on small-cell lung cancer from Drs. David Dawe and Peter Ellis—a hot topic since the recent progress with immunotherapy in this aggressive type of lung cancer.
Dawe presented a meta-analysis that emphasized the importance of chemotherapy completion, as much as the type of platinum agent used, for patient outcomes. The evidence also suggests that etoposide remains the key agent in combination chemotherapy. Ellis summarized recent progress with checkpoint inhibitors in small-cell lung cancer and biomarkers that could potentially begin to indicate the patient population that will gain the most benefit from those drugs.

The respiratory session continued the theme of smoking cessation with an opportunity to “Meet the Professor” with Dr. Graham Warren and a presentation from Ms. Katherine McKay from QuitNow, the free quit-smoking program offered by the government of British Columbia.

The surgical oncology breakout session opened with a discussion of the single-centre experience of uniportal video-assisted thoracic surgery for lung cancer resection from Dr. Paula Uglande. A retrospective analysis of more than 700 cases suggests that the technique is feasible, with immediate outcomes similar to those seen with multiportal video-assisted thoracic surgery. Long-term outcomes and studies with long-term follow-up are needed to evaluate the oncologic efficacy of the technique. Dr. Anna McGuire then gave an update on microcoil localization of pulmonary nodules. The session concluded with an enlightening discussion by Dr. Kyle Grant about the evidence for various surgical resection techniques in early-stage lung cancer—including segmentectomy and wedge resection—and current research in that field.

Debates

Fuelled by a visit to the candy bar, the debates again proved to be the highlight of the conference.

Dr. Geoffrey Liu argued poetically in favour of the more mature alectinib data in first-line ALK-positive lung cancer. The audience members were almost swayed by Dr. Jeff Rothenstein’s sporting prose (and moniker-themed repartee) in support of brigatinib, but narrowly voted in favour of Liu’s beloved alex.

Drs. Gregory Videtic and Wael Hanna debated dual-modality compared with trimodality treatment for stage III lung cancer. Despite Videtic’s eloquent presentation in favour of chemoradiation, including the very persuasive data from the PACIFIC clinical trial, Hanna won over the audience by contextualizing the surgical data thus far and emphasizing the heterogeneity of N2 lung cancer.

The final debate was a passionate discussion of the biomarker of the moment: tumour mutational burden. After and persuasive presentations from both Dr. Frances Shepherd and Dr. Rosalyn Juergens, the audience voted in favour of the opinion that tumour mutational burden is a practice-modifying biomarker for immunotherapy.

The Betty Rice Award Presentation

The penultimate event of the day was the presentation of the Betty Rice Award to trainees Drs. David Tsui and Brenda Minatel. The Betty Rice Award, presented each year in memory of Ms. Rice, who passed away from lung cancer, is always a poignant reminder of why lung cancer research and improving patient outcomes and experience is at the heart of lung cancer care. Rice’s family attended the conference, and her daughter gave an inspiring speech describing her mother’s journey with lung cancer and giving thanks to the award recipients and wider audience. Minatel accepted her award in absentia, and Tsui presented his work exploring outcomes with various chemotherapeutic combinations alongside radiation in stage III disease in Alberta.

SUMMARY

The clcco was again a resounding success, bringing together multidisciplinary colleagues in a collegial atmosphere to discuss the latest advances in lung cancer care. Highlights included fascinating keynote perspectives, integration of new technologies with newer treatments, a timely reminder that simple interventions can make a huge difference, and highly entertaining debates. Trainees and young investigators thoroughly enjoyed the preconference session and the opportunity to meet experts in lung cancer care. With advances being made in all areas of lung cancer care each year, clcco is invaluable in promoting lung cancer research and new standards of care across Canada.

CONFLICT OF INTEREST DISCLOSURES

We have read and understood Current Oncology’s policy on disclosing conflicts of interest, and we declare the following interests: CH reports grants and personal fees from AstraZeneca, personal fees and other consideration from Boehringer Ingelheim, personal fees and other consideration from Pfizer, personal fees from Bristol-Myers Squibb, personal fees and other consideration from Roche, personal fees from Lilly, grants and personal fees from Eisai, personal fees from Merck, and personal fees from Bayer, all outside the submitted work. BM reports fees as an advisory board member and honoraria from Bayer, Pfizer, AstraZeneca, Boehringer Ingelheim, and Roche. AP, EMD, and SKW have no conflicts of interest to disclose.

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