WCLC Celebrates Australia at Gala Dinner

WCLC 2013 delegates traveled to Sydney for the conference, but many of them took on another adventure Tuesday night at the Gala Reception and Dinner, “A Journey Through Australia.”

During the evening, guests got a taste of the bush of Western Australia, the iconic deserts of the Red Centre, the grazing lands of the continent, the pristine beaches of the Gold Coast, the lush wine valleys of New South Wales and the dazzling nightlife of Sydney.

The event also highlighted Australian produce and wines, and everyone had an opportunity to get photos of regional wildlife, including a kangaroo, a wombat and lizards.

Dinner featured regional cuisine, the indigenous culture — including a dance performance to powerful rhythms — and music that featured Australian classics and other hits so attendees could do a little dancing of their own.

WCLC 2013 will draw to a close today with another full day of programming, concluding with the Closing Plenary Session, from 16:16 to 17:45 in the Plenary Hall, Ground Level (see related article on page 6).

From IASLC Fellow to Executive Director/CEO

Fred R. Hirsch, MD, PhD

It is with great honor and pride that I have accepted to serve as the IASLC’s next executive director. Following such giants in lung cancer research and organization as Heine H. Hansen and Paul A. Bunn Jr., is by itself a great honor, but at the same time quite a challenge. However, I have “grown up” with IASLC and feel very much an obligation to move this organization forward to continued success.

My career in lung cancer and within IASLC could not have happened without the IASLC Fellowship I received many years ago as one of the first IASLC Fellows, which made it possible for me to pursue my “scientific dream,” which was to go to a highly recognized academic institution in the United States to join a well-established lung cancer team where I could continue my lung cancer research. With the help of an IASLC Fellowship, Dr. Bunn at the University of Colorado made this dream possible for me — and for that I am very thankful.

Watching the growth of IASLC under Dr. Hansen’s and Dr. Bunn’s leadership, I have learned much about the Association, and I have also been blessed by the opportunity to serve the organization in many capacities, including committee chair positions, editor of the IASLC Newsletter, many years on the Board of Directors and service as IASLC treasurer. The times are changing, and with that come challenges. Electronic technology has rapidly evolved and gives many opportunities but also requires new approaches to databases, e-learning, websites and many opportunities for educational programs, which I hope to develop over the next years in the form of new webinars and digital textbooks, as seen Hirsch, page 3.
Survival Benefit Unchanged With Addition of Cetuximab to Chemoradiotherapy

The addition of cetuximab to standard chemoradiotherapy provided no survival benefit to patients with stage III non-small cell lung cancer (NSCLC), according to the results of the Radiation Therapy Oncology Group (RTOG) 0617 phase III trial. Gregory A. Masters, MD, medical oncologist at the Helen F. Graham Cancer Center, Newark, USA, presented the findings of the trial at the Presidential Symposium Tuesday.

“This study tells us that cetuximab should not be considered a standard component in the treatment of patients with stage III NSCLC,” said Dr. Masters. “Newly designed Cooperative Group trials are under way to help individualize therapy for subsets of the population with genetic alterations.”

RTOG 0617 had two primary objectives: to compare standard chemoradiotherapy with and without the addition of cetuximab and to compare standard-dose (60 Gy) and high-dose (74 Gy) radiotherapy with concurrent chemotherapy. The results of the second objective were presented at the 2013 ASCO Annual Meeting, and Dr. Masters focused his presentation on the effect of the addition of cetuximab.

Patients were eligible for the study if they had newly diagnosed, unselectable stage IIIA/B NSCLC; patients who had N2 or N3 disease and an undetectable primary tumor also were eligible. A total of 237 patients received cetuximab (with standard or high-dose radiation) and 228 did not. The primary endpoint was overall survival, defined as the time of enrollment until death due to disease.

Dr. Masters reported that the addition of cetuximab did not improve overall survival. Progression-free survival also was not significantly improved. The dose of radiation did not affect survival with and without cetuximab. Cetuximab also significantly increased the frequency of overall grade 3-5 toxicities (85 percent versus 69 percent, p<0.0001), and grade 3-5 non-hematologic toxicities (70.5 percent versus 50.7 percent, p<0.0001).

Original Aboriginal artwork is available for sale, with profits going to IASLC and Lung Foundation Australia (LFA) to help improve outcomes in Aboriginal and indigenous people with lung cancer. IROC (Indigenous Respiratory Outreach Care) is a proud supporter of WCLC 2013. To purchase the artwork, go to the IROC booth, no. 2304 in the exhibit hall.

IROC is an initiative of the Queensland Statewide Respiratory Network, as part of the Australian “Closing the Gap” effort to reduce health disparities in Aboriginal and indigenous people in whom lung cancer is more common and who have poorer outcomes. This original artwork has been hand-painted for WLCC delegates who may wish to purchase them as souvenirs.
Study Shows VATs Partial Pleurectomy Improves Quality of Life for Malignant Mesothelioma Patients

A multicenter randomized controlled trial showed that the overall survival after video-assisted thoracoscopic (VATs) partial pleurectomy was similar to that after talc pleurodesis but offered improved control of pleural effusion and quality of life for patients with malignant pleural mesothelioma. Robert Rintoul, MD, respiratory physician and professor at Papworth Hospital in Cambridge, UK, presented the findings of the trial during the Presidential Symposium Tuesday.

Talc pleurodesis has been used to control pleural effusion, but non-randomized studies have suggested that VATs partial pleurectomy may lead to increased survival compared with talc pleurodesis. Dr. Rintoul and colleagues, the MesoVATs investigators, conducted the study to compare the two surgical approaches.

The study included 196 patients who had confirmed mesothelioma (120 patients) or suspected mesothelioma (76 patients). Eligibility criteria included the presence of pleural effusion and no previous pleurodesis or primary treatment. The patients were randomly assigned to either VATs partial pleurectomy or talc pleurodesis. Twenty-one patients were excluded because they were found to have non-mesothelioma, leaving 87 patients in the VATs partial pleurectomy group and 88 in the talc pleurodesis group. The baseline characteristics were similar for the two groups.

The primary endpoint was overall survival, and secondary endpoints included quality of life, as measured by the EQ-5D (at baseline and at one, three, six and 12 months after treatment), control of pleural effusion (at baseline and at one, three, six and 12 months) and complications.

Dr. Rintoul reported that the overall survival was similar for the two groups at six months (78 percent for VATs pleurectomy versus 80 percent for talc pleurodesis) and at 12 months (52 percent for VATs pleurectomy versus 57 percent for talc pleurodesis). VATs pleurectomy led to significantly better control of pleural effusion at one month (p=0.008) and at six months (p=0.04); control was similar for the two groups at three months and was slightly better for talc pleurodesis at 12 months (see figure).

According to the results of the EQ-5D, quality of life was significantly better at six and 12 months (p=0.042 and 0.006, respectively) for patients who had VATs pleurectomy.

Dr. Rintoul said that complications, especially respiratory complications, were more common in the VATs pleurectomy group, but that there was no difference between the two groups with respect to serious adverse events. Dr. Rintoul suggested that VATs partial pleurectomy may be the better surgical option to improve symptom control and quality of life for this cohort of patients with limited life expectancy.
**Question of the Day**

“What Has Been the Most Interesting Topic or Session You Have Seen at the Conference?”

Tarek Meniawy, MD
Perth, Australia

“I am a radiologist, so I have an interest in pathology and new findings involving staging and response to therapy, as well as the imaging, because there is a lot of imaging here, too. There have been a lot of good presentations in those areas, but I’ve also been interested in genetic testing that the medical oncologists are interested in because it overlaps into my field.”

David Shelton, MD
Sacramento, USA

“One of the best topics has been the heterogeneity of tumors, and those with metastasis. It has been very interesting regarding how we are going to fight these in the future, and the ways we are trying to approach cancer — for individuals or as a whole. Molecular targeted therapies and the next directions for clinical trials have been interesting, and the Monday plenary was memorable.”

Luis A. Corrales, MD
San Jose, Costa Rica

“Monday there was a symposium session on maintenance therapy that was very interesting concerning the outcomes for survival of patients. The faculty was very interesting in delivering all of the theory and the clinical practice of using maintenance approaches.”

Hartono Salim, MD
Jakarta, Indonesia

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**Second-Generation ALK Inhibitor Shows Promise in Phase I Dose-Escalation Study**

A phase I dose-escalation study showed promising antitumor activity for the ALK inhibitor alectinib for patients with ALK-positive non-small cell lung cancer (NSCLC) refractory to crizotinib. Shirish Gadgeel, MD, Karmanos Cancer Institute, Detroit, USA, reported the findings in the Oral Abstract Session: NSCLC – Targeted Therapies III on Tuesday.

Current treatment of ALK-positive NSCLC is crizotinib, which has been associated with an overall response rate of 50 to 65 percent and a duration of response of 7.7 to 10 months, said Dr. Gadgeel. However, many resistance mechanisms have been identified. Alectinib is a second-generation, highly selective inhibitor of ALK that has demonstrated the potential to overcome crizotinib resistance. The study enrolled 47 patients at five sites: 34 in the phase 1 dose-escalation cohort and 13 in the bridging cohorts. In the dose-escalation cohort, the drug was given twice daily at a total dose of 300 mg (seven patients), 460 mg (seven patients), 600 mg (six patients), 760 mg (seven patients) and 900 mg (seven patients). In the bridging cohorts, the drug was given twice daily at a total dose of 600 mg (seven patients) and 900 mg (six patients).

Eligibility criteria included failure of crizotinib treatment, with no exposure to other ALK inhibitors; 14 days from chemotherapy or radiation therapy; and a 14-day washout period from crizotinib. Patients with brain metastases and/or leptomeningeal metastases were eligible for the study. The median duration from the last dose of crizotinib was 18 days, and 85 percent of patients had received crizotinib within two months before starting treatment with alectinib. All patients had histologically confirmed adenocarcinoma and ALK testing by fluorescence in situ hybridization. Dr. Gadgeel reported that the overall response rate was 54.5 percent across all cohorts and was 59.5 percent among cohorts of patients who received a dose of 460 mg or higher. The median duration of treatment was greater than four months. Preliminary clinical data indicated that alectinib had activity against central nervous system metastases refractory to crizotinib.

The drug was well-tolerated, with no treatment-related dose reductions needed for patients taking up to 600 mg twice daily. Two patients receiving the highest dose had dose-limiting toxicities: grade 3 headache in one and grade 3 neutropenia requiring dose-holding for seven days in the other. Among all patients, the most common adverse event was fatigue, occurring in 14 patients (30 percent).

The mean multiple-dose pharmacokinetic parameters of alectinib generally increased with dose, although moderate variability was found. Based on the pharmacokinetics, efficacy, and tolerability, a dose of 600 mg was chosen as the recommended phase 2 dose. Alectinib has been granted breakthrough therapy designation by the US Food and Drug Administration (FDA), and a global single-arm phase II study of the drug for crizotinib-resistant ALK-positive NSCLC has been activated.

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**Algorithm Helps Manage Pulmonary Nodules**

Researchers from the NELSON trial have developed an algorithm that may help better manage pulmonary nodules detected by low-dose computed tomography. The algorithm addresses a common challenge for clinicians, as approximately half of the people screened have at least one pulmonary nodule, but only a small percentage are lung cancers, said Nanda Horvseg, MD, Erasmus University Medical Center, Rotterdam, Netherlands. Dr. Horeweg presented the findings of the study to design the algorithm at the Presidential Symposium Tuesday.

Various thresholds have been established for the management of lung nodules based on size, as researchers have attempted to balance the harms and benefits. “When you raise the threshold, you can reduce the harms of screening,” Dr. Horeweg said. “But there is a risk also; you could miss the opportunity to diagnose and treat an early lung cancer.”

The current standard is to use thresholds based on the Fleischner criteria, which define nodules less than 4 mm as benign and those more than 8 mm as malignant. The NELSON researchers sought to design an algorithm based on the estimated lung cancer probability according to the size and growth rate of screen-detected nodules among the 7,155 Dutch persons who had screening in the NELSON trial (9,681 nodules detected).

Overall, the probability of lung cancer in the NELSON trial was 1.3 percent over two years of follow-up. When the data were evaluated according to the volumetric size of the largest nodule, the probability of lung cancer associated with nodules less than 100 mm³ was not significantly different from that for participants with no nodules. The probability of lung cancer increased significantly for nodules that were 100-300 mm³, and nodules greater than 300 mm³ were associated with the highest probability of lung cancer.

The probability of lung cancer associated with nodules less than 5 mm in diameter was not significantly different from participants with no nodules. The probability became significant for nodules 5-6 mm in diameter, and nodules 10 mm in diameter and larger were associated with the highest probability.

These investigators used these data to classify screening results as negative, indeterminate or positive (see table). Dr. Horeweg said that for negative screening results, no additional follow-up CTs or diagnostic procedures are needed for two years. An indeterminate screening result justifies a follow-up CT, and a positive result warrants an immediate workup. She added that volume doubling time can be used for risk stratification. When the result is indeterminate, the volume doubling time should be assessed on follow-up CT; a doubling time of 600 days or more represents a negative result, and a doubling time less than 600 days represents a positive result.

The sensitivity of this algorithm was 91 percent, and the specificity was 95 percent. Dr. Horeweg noted that these parameters were similar to those for the algorithm based on Fleischner criteria and resulted in fewer diagnostic workups and follow-up CTs.

Dr. Horeweg emphasized the need to evaluate the underlying probability of lung cancer in a population before applying an algorithm for management of lung nodules. The algorithm she and her colleagues designed should be applied only to populations with risk comparable to participants in the NELSON trial.

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**TABLE. PROPOSED ALGORITHM FOR THE MANAGEMENT OF SCREEN-DETECTED LUNG NODULES**

<table>
<thead>
<tr>
<th>Screening Result</th>
<th>Size of Largest Nodule</th>
<th>Diameter (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Negative</strong></td>
<td>≤100</td>
<td>≤5</td>
</tr>
<tr>
<td><strong>Indeterminate</strong></td>
<td>≥100 to 300</td>
<td>≥5 to 10</td>
</tr>
<tr>
<td><strong>Positive</strong></td>
<td>≥300</td>
<td>≥10</td>
</tr>
</tbody>
</table>

*People who have indeterminate results should have follow-up CT to assess the volume doubling time; the final screening result is negative for a doubling time of 600 days or more and is positive for a doubling time of less than 600 days.*
Pemetrexed Shows Promise as EGFR wild-type non-squamous NSCLC Treatment in CTONG Trial

Pemetrexed outperformed gefitinib as a second-line treatment for advanced non-squamous non-small cell lung cancer (NSCLC) in East Asia in the CTONG 0806 phase II trial. The study results were presented Tuesday during Oral Abstract Session: Medical Oncology.

Qing Zhou, MD, Guangdong Lung Cancer Institute, Guangzhou, China, presented “Final Results of CTONG 0806: A Phase II Trial Comparing Pemetrexed With Gefitinib as Second-line Treatment of Advanced Non-squamous NSCLC Patients With wild-type EGFR.” CTONG 0806 was a multi-center, randomized, controlled, open-label phase II trial that enrolled 161 patients from February 2009 to August 2012.

In the trial, patients with metastatic non-squamous NSCLC with wild-type EGFR detected by direct sequencing who were previously treated with platinum-based chemotherapy were randomized to receive gefitinib or pemetrexed. Subjects in the gefitinib arm received 250 mg/day orally, and patients in the pemetrexed arm received 500 mg/m² IV on day 1 and every 21 days until disease progression or unacceptable toxicity. Of the 157 patients evaluated, 81 were in the gefitinib arm and 76 were in the pemetrexed arm.

The primary endpoint was progression-free survival (PFS). Secondary endpoints included four-month and six-month PFS rates, overall survival (OS), objective response rate (ORR), disease control rate (DCR), quality of life and safety. The primary endpoint of PFS was met in 4.8 months in the pemetrexed arm versus 1.6 months in the gefitinib arm, which was confirmed by Independent Review Committee evaluation (5.6 versus 1.7 months).

“Significant difference between the two arms was also seen in terms of four-month PFS rate, six-month PFS rate and DCR,” according to the study authors.

Pemetrexed also showed a trend of superiority in terms of OS, 12.4 months versus 9.6 months in the gefitinib arm. The EGFR mutation status was tested by Scorpion amplification refractory mutation system (ARMS) in patients with enough tumor tissue. In patients with wild-type EGFR confirmed by ARMS, the median PFS was 4.0 months in the pemetrexed arm versus 1.3 months in the gefitinib arm. Interestingly, in all patients with EGFR wild-type detected by direct sequencing, the ORR in the pemetrexed arm was 13.2 percent versus 13.6 percent in the gefitinib arm.

However, in patients with EGFR wild-type confirmed by ARMS, the ORR in the gefitinib arm declined to 2.4 percent while the pemetrexed arm was 11.4 percent. In terms of toxicity, patients who received gefitinib had more skin rashes and diarrhea than patients who took pemetrexed, but pemetrexed was associated with more fatigue, anemia and ALT increase than gefitinib.

“CTONG 0806 is the first trial to show significant improvement in PFS, DCR and a trend of improving OS with pemetrexed compared with gefitinib in a second-line setting for EGFR wild-type advanced non-squamous NSCLC. Pemetrexed should be recommended for this population due to its good efficacy and tolerability,” concluded the study authors.

They also reported that in a second-line setting, “EGFR mutation status should be determined to guide treatment strategy,” and they concluded that ARMS could be better than direct sequencing in defining an exact population that could benefit from EGFR TKIs.
**Promise, Challenges of Genomics to Highlight Closing Plenary**

The closing plenary session is all about the promises and challenges of genomics, and how this is changing from a research tool into part of routine care for lung cancer. 

Tony Mok, MD, ChB, FRCS, and 2013-2015 IASLC President 

Michael Boyer, MD

"The closing plenary session is all about the promises and challenges of genomics, and how this is changing from a research tool into part of routine care for lung cancer," Michael Boyer, MD, Sydney Cancer Center, Australia, said of the session, "Genomics: From Research Tool to the Lung Cancer Clinic."

"People should attend because as this shift occurs it is important to understand both the promise as well as the limitations of genomics. It may also present challenges for clinicians, working out how to incorporate this into the routine care of patients," he said.

The first of three presentations about genomics will be "Implications of Lung Cancer Genome Sequencing," in which Ramaswamy Govindan, MD, professor of medicine in the Division of Medical Oncology at Washington University School of Medicine, St. Louis, USA, will discuss how technology can be used to develop treatments for altered genes.

"Cancer is a disease of the genome. When the genes get disrupted, it results in cancer," said Dr. Govindan, co-director of the Section of Medical Oncology at Washington University. "Today we have the tools and technology to understand how these genes are altered, and based on these alterations we are able to fashion treatments that eliminates the alterations to the gene."

"We can scan that patient’s tumor cells and discuss how the genes are altered using exome sequencing, transcriptome sequencing and whole genome sequencing. By doing these kinds of unbiased genomic analyses, we should be able to identify novel targets, subclassify these into different categories based on the genomic alterations and identity biomarkers that would predict response to given therapy," Dr. Govindan said he would review data from The Cancer Genome Atlas and research from the Washington Genome Institute to discuss their implications for clinical development and future directions for genomic research.

"The second presentation, "Challenges in Bioinformatics," by Yu Shyr, PhD, will discuss how technological advances that collect massive amount of information complicate the research work."

"Not only is the amount of data huge, but the data analysis is challenging. It is much more complicated than microarray data," said Dr. Shyr, Harold L. Moses Chair in Cancer Research, Vanderbilt University, Nashville, USA. "When we started to talk about genomics research in lung cancer, we started with microarray data and GWAS data. Once we moved to next generation sequencing (NGS) data, it became an amount that is much bigger. We are dealing with 3 billion variables in front of us. With microarray data, we were dealing with 45,000 variables. With GWAS data, we were dealing with 1 or 2 million variables. The computing is quite challenging."

In sequencing analysis, researchers look at data in a different way, using gene network/pathway analysis and whole systems biology analysis, he said. The software packages for these analyses require updates almost weekly.

"This has created a new era of drug development, or personalized medicine for lung cancer research," Dr. Shyr said. "We have opened this door so we can generate more data, but the challenge in bioinformatics is the software development. Most of this software does not agree with each other."

"In the past, one lab had one or two people to handle data analysis. That era is done. We need teams across labs, and even institutions. Now you have to deal with sequencing data, and you need more software, data storage capacity and manpower."

Chandra P Belani, MD, Miriam Beckner Distinguished Professor of Medicine and deputy director, Hershey Cancer Institute, Penn State University, Hershey, USA, will present "Challenges for the Clinician. He will discuss adopting the enormous amount of data from NGS technologies and show the impact of all the information now available that influences decision-making."

"The challenge is development of novel agents and therapies based on specific targetable abnormalities," Dr. Belani said. "The departure from the empirical treatment of lung cancer to individualized and tailor-made approaches based on distinct molecular subtypes represents the best hope towards achieving meaningful progress."

NGS detects multiple genes simultaneously as opposed to individual gene testing, allowing for an efficient and cost-effective approach.

"The wide application of NGS will require a culture change due to new system requirements and relearning genetics/genomics by the clinicians," Dr. Belani said. "Dealing with challenges in translating the enormous amounts of genomics data being generated into the care of our patients will be the key."

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**Interview With Key Leaders**

**IASLC: A Look Back and Forward**

This year’s WCLC has featured a celebration of IASLC’s 40th anniversary, with highlights of its most important accomplishments. These accomplishments have laid a solid foundation for continued growth and success in the coming years.

Among IASLC’s greatest accomplishments are its staging publications and its guidelines on molecular testing developed in conjunction with the College of American Pathologists (CAP) and the Association of Molecular Pathologists (AMP), said Karen Kelly, MD, professor of medicine and associate director for clinical research, University of California, Davis, Comprehensive Cancer Center, Sacramento, USA, and a 2011-2013 member of the IASLC Board of Directors.

"Recognizing that accurate diagnosis and staging of lung cancer is the key to ensuring that patients receive the best treatment no matter where they reside in the world, and that the IASLC took it upon itself to become the authority on the staging of lung cancer was visionary," Dr. Kelly said. "No other society has done what IASLC has done in terms of staging."

Dr. Kelly added that the Pathology Committee has played a similar leadership role in the World Health Organization classification of lung cancer. "The committee’s recent collaboration with CAP and AMP on molecular guidelines for the selection of patients appropriate for EGFR and ALK tyrosine kinase inhibitor therapy is an invaluable resource," she said. "Today the impact the IASLC has had on the global lung cancer problem and the ability of the IASLC to identify and address knowledge gaps via international collaboration."

"Long Wu, FACS, chief of Guangdong Lung Cancer Institute, and vice president, Guangdong General Hospital and Guangdong Academy of Medical Sciences, confirms this impact. "The IASLC lung cancer staging had widely influenced research and practice in China. The Chinese Lung Cancer guideline was based on the IASLC staging," he said. Prof. Wu joined the IASLC Board of Directors this year.

Attracting new members must be a goal for the future, Dr. Kelly said. "With the establishment of a permanent office and increased staff, the IASLC has been able to offer more services and resources to members than ever before. The international and multidisciplinary nature of the organization makes IASLC an attractive organization to belong to, but we must identify and overcome the barriers to membership in disparate countries."

She added that IASLC regents around the world have been helpful in this endeavor. Dr. Wu agrees that increasing membership should be a priority, and he looks forward to serving on the Board and helping "to promote more information exchange, increasing the number of Chinese physicians who become IASLC members. "As the president of the Chinese Society of Clinical Oncology (CSCO) and the past director of the Chinese Society of Lung Cancer (CSLC), I would like to do my best to have members of these organizations participate in more activities initiated by IASLC."

Both Prof. Wu and Dr. Kelly noted that attracting and supporting younger physicians should be another priority. Dr. Wu said he would like to see IASLC establish scholarships for young physicians in developing countries to provide them with more chances to learn from physicians in other countries. Dr. Kelly said she would like to see IASLC increase the number of its fellowships.

The move to an annual WCLC is another key issue for both Dr. Kelly and Dr. Wu. "At this WCLC, we have seen a record number of abstracts submitted, attesting to the rapid pace of new knowledge that is being generated across the spectrum of thoracic malignancies."

Having an annual conference will allow us to build more quickly on the knowledge we’re gaining, which means we can help patients sooner," Dr. Kelly said. Prof. Wu added, "In a knowledge-breakout era, we need a platform to exchange our scientific insight, distribute new information and debate some clinical issues quickly. The annual WCLC is the platform."
Plenary to Examine Four Approaches to Battling Lung Cancer

Lung cancer continues to be the leading cause of cancer-related mortality, so a Wednesday plenary session will feature four presenters from around the world talking about four different approaches to battle the disease. “This is the most critical cancer in terms of worldwide incidence and mortality. We need to try to reduce the burden through multiple approaches such as tobacco control, reductions in exposures, early detection and targeted approaches,” said Chris Amos, PhD, co-chair of “How Can We Stop the Epidemic of Lung Cancer.” The plenary will be presented from 08:15 to 09:45 today in Bayside Gallery B, Level 1.

His co-chair, Caicun Zhou, MD, PhD, director of the Department of Oncology, Shanghai Pulmonary Hospital, China, said the plenary would present the latest data on the positive effects of smoking cessation, review drivers for lung cancer in non-smokers, examine the effect of cancer screening using low-dose computed tomography (LDCT) and discuss the promise of identifying biomarkers in screening.

“The incidence and mortality of lung cancer are still increasing in many parts of the world,” Dr. Zhou said. “The majority of lung cancer is diagnosed at advanced or metastatic stages because of no symptoms or signs of early lung cancer. So, the five-year survival rate is still unsatisfactory.” Control of lung cancer is still a tough task.”

The first speaker at the plenary will be Valerie Beral, DBE, AC, MA, FRs, director of the Cancer Epidemiology Unit, University of Oxford, UK, who will present “Risk Reduction by Stopping Smoking.” In particular, she will address the benefits of tobacco control in women.

“The reason this is an area of concern is that we have probably done a better job with reducing smoking in men than women. We need to consider its cost-effectiveness,” Dr. Zhou said of CT screening. “Many benign lesions are also detected by CT. It is not clear whether it could be used in low-risk populations, such as never-smokers.”

Screening studies show a 7 percent reduction in overall mortality and a 20 percent reduction in lung cancer-specific mortality, Dr. Amos said.

“There is a lot of hope that this approach to screening will lead to early detection and a decrease in mortality for lung cancer,” he said. “The question is how practical that approach is for a more general population. Dr. Quoix will provide information about the benefits of CT lung cancer screening. Most other screenings have an impact on mortality, and lung cancer CT screening is remarkably effective compared to other screening modalities, but that was in a clinical trial setting.”

The final presentation will be “Biomarker-Driven Programs for Lung Cancer Screening,” presented by Pierre Massion, MD, Ingram professor of cancer research at Vanderbilt University, Nashville, USA, who has focused his research for several years on identifying biomarkers.

“CT screening has an impact on patients because a large percentage of individuals have lesions that require a follow-up,” Dr. Amos said. “Most of those lesions are not related to lung cancer, and so there is a large percentage of individuals who have to undergo repeated CT screening. There are the cost and concerns about their health. If we could avoid unnecessary screening, that would be beneficial to everyone.”

Dr. Massion has been examining bronchial breath and other methods of obtaining bronchial samples, Dr. Amos said. “That is very informative, but invasive. Other approaches would be serum-based markers.” Attendees can expect to leave the session updated on the latest research efforts to reduce lung cancer, Dr. Zhou said.

“There are a lot of questions needed to be answered for control of lung cancer. Four speakers will tackle such kinds of questions in their remarks,” he said.

Therapies Matched to Oncogenic Drivers in Lung Cancer Improve Survival

Data analyzed by the Lung Cancer Mutation Consortium (LCMC) demonstrate that patients with stage IV lung adenocarcinomas who received treatment matched to oncogenic drivers lived longer than those who did not.

“Oncogenic drivers defined a distinct cohort of patients and a distinct clinical course, “Lived longer than those who did not. Treatment matched to oncogenic drivers (tumor) for each molecularly defined cohort, disease) for each molecularly defined cohort,” said Mark G. Kris, MD, Memorial-Sloan Kettering Cancer Center, New York, USA, who presented the findings on behalf of the LCMC.

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