Proceedings from the 13th Annual Winter Lung Cancer Conference

CME Information

TARGET AUDIENCE

This educational activity has been designed to meet the educational needs of medical oncologists, hematologyoncology fellows, nurse practitioners and other allied cancer professionals involved in the treatment of lung cancer.

OVERVIEW OF ACTIVITY

Lung cancer is a devastating disease that accounts for approximately 13% of new cancer cases and more cancerrelated deaths among both men and women than any other tumor type. In the year 2016, it is estimated that 224,390 individuals will be diagnosed and 158,080 individuals will die from the disease. The plethora of available cytotoxic chemotherapies exhibiting activity in lung cancer has increased substantially over the past several years, and development of new therapeutic strategies beyond cytotoxic chemotherapy has been the focus of extensive recent research and has led to an explosion in lung cancer genetic and biologic knowledge. The advent of these next-generation treatments presents new promise of both efficacy and enhanced safety for patients with lung cancer but also challenges practicing oncologists to appropriately select individuals who may benefit from these agents and to determine how to integrate such therapies, as they become available, into standard lung cancer treatment algorithms.

This unique educational activity delivers highly applicable current clinical information delving into the personalized management of this challenging disease and provides clinicians with a concise, easy-to-understand resource to facilitate knowledge and application of optimal diagnostic and therapeutic approaches.

LEARNING OBJECTIVES

- Develop an evidence-based strategy for the treatment of localized non-small cell lung cancer (NSCLC), exploring the role of (neo)adjuvant systemic therapy.
- Employ an understanding of personalized medicine to individualize the use of available EGFR inhibitors in the treatment of NSCLC.

- Describe mechanisms of tumor resistance to EGFR tyrosine kinase inhibitors, and identify therapeutic opportunities to circumvent this process, including the recently approved third-generation agent osimertinib.
- Communicate the efficacy and safety of crizotinib, ceritinib, alectinib and other emerging ALK inhibitors to appropriate patients with NSCLC, considering the predictive utility of ALK and ROS1 mutation testing.
- Devise an evidence-based approach to the selection of induction and maintenance systemic therapy for patients with NSCLC without a targetable mutation.
- Appreciate the recent FDA approvals of nivolumab and pembrolizumab, and consider their role in the formulation of optimal treatment approaches for patients with metastatic NSCLC.
- Describe emerging data on the efficacy and safety of tumor immunotherapy in lung cancer, and consider this information when counseling patients regarding clinical trial participation.
- Consider biologic and patient-related factors in the selection of later-line therapy for individuals with progressive NSCLC without a targetable mutation.
- Assess new oncogenic pathways mediating the growth of unique NSCLC tumor subsets, and recall emerging data with experimental agents exploiting these targets.
- Formulate management strategies for small cell lung cancer, considering the contributory roles of local and systemic therapy.
- Consider the use of multimodality therapy for appropriate patients with mesothelioma who may potentially be cured with this approach, and devise optimal treatment strategies for those with advanced disease.
- Recall the design of ongoing clinical trials evaluating novel investigational agents in lung cancer, and counsel appropriately selected patients about availability and participation.

ACCREDITATION STATEMENT

Research To Practice is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

CREDIT DESIGNATION STATEMENT

Research To Practice designates this enduring material for a maximum of 10.25 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

HOW TO USE THIS CME ACTIVITY

This CME activity consists of a video component. To receive credit, the participant should watch the video, complete the Post-test with a score of 80% or better and fill out the Educational Assessment and Credit Form located at **ResearchToPractice.com/WLCC2016/CME**.

CONTENT VALIDATION AND DISCLOSURES

Research To Practice (RTP) is committed to providing its participants with high-quality, unbiased and state-of-theart education. We assess conflicts of interest with faculty, planners and managers of CME activities. Conflicts of interest are identified and resolved through a conflict of interest resolution process. In addition, all activity content is reviewed by both a member of the RTP scientific staff and an external, independent physician reviewer for fair balance, scientific objectivity of studies referenced and patient care recommendations.

FACULTY — The following faculty (and their spouses/partners) reported relevant conflicts of interest, which have been resolved through a conflict of interest resolution process:

Julie R Brahmer, MD

Director, Thoracic Oncology Program Interim Director, Johns Hopkins Kimmel Cancer Center at Bayview Associate Professor of Oncology Sidney Kimmel Comprehensive Cancer Center Johns Hopkins School of Medicine Baltimore, Maryland

Advisory Committee: Bristol-Myers Squibb Company, Merck; Consulting Agreements: Bristol-Myers Squibb Company, Celgene Corporation, Lilly, Merck; Contracted Research: AstraZeneca Pharmaceuticals LP, Bristol-Myers Squibb Company, MedImmune Inc.

Walter J Curran Jr, MD

Executive Director, Winship Cancer Institute Lawrence W Davis Professor and Chairman Dept of Radiation Oncology Group Chairman, NRG Oncology Georgia Research Alliance Eminent Scholar and Chair in Cancer Research Emory University Atlanta, Georgia

Consulting Agreements: AstraZeneca Pharmaceuticals LP, Bristol-Myers Squibb Company.

Gary Deng, MD, PhD

Interim Chief, Integrative Medicine Service Associate Member/Attending Physician Memorial Sloan Kettering Cancer Center New York, New York

No relevant conflicts of interest to disclose.

Giuseppe Giaccone, MD, PhD

Associate Director for Clinical Research Lombardi Comprehensive Cancer Center Professor of Medical Oncology and Pharmacology Georgetown University Director of Clinical Research MedStar Health Cancer Network's Washington Region Washington, DC

Advisory Committee: Celgene Corporation; **Contracted Research:** AstraZeneca Pharmaceuticals LP, Karyopharm Therapeutics.

David H Harpole Jr, MD

Professor of Surgery Associate Professor in Pathology Vice Chief, Division of Surgical Services Duke University School of Medicine Durham, North Carolina

No relevant conflicts of interest to disclose.

Leora Horn, MD, MSc

Associate Professor of Medicine Assistant Director Educator Development Program Vanderbilt University Medical Center Nashville, Tennessee

Advisory Committee: Bristol-Myers Squibb Company, Genentech BioOncology, Merck; Consulting Agreements: Bayer HealthCare Pharmaceuticals, Bristol-Myers Squibb Company, Xcovery; Contracted Research: AstraZeneca Pharmaceuticals LP.

Corey J Langer, MD

Director of Thoracic Oncology Abramson Cancer Center Professor of Medicine Perelman School of Medicine University of Pennsylvania Vice Chair, Radiation Therapy Oncology Group Philadelphia, Pennsylvania

Advisory Committee: Abbott Laboratories, Boehringer Ingelheim Pharmaceuticals Inc, Bristol-Myers Squibb Company, Celgene Corporation, Genentech BioOncology, Lilly, Merck, Novartis Pharmaceuticals Corporation, Pfizer Inc; Consulting Agreements: Abbott Laboratories, AstraZeneca Pharmaceuticals LP, Bayer HealthCare Pharmaceuticals, Boehringer Ingelheim Pharmaceuticals Inc, Bristol-Myers Squibb Company, Celgene Corporation, Genentech BioOncology, Lilly, Merck, Pfizer Inc; Contracted Research: Astellas Pharma Global Development Inc, Celgene Corporation, Genentech BioOncology, GlaxoSmithKline, Merck; Data and Safety Monitoring Board: AbbVie Inc, Amgen Inc, Lilly, Peregrine Pharmaceuticals Inc, Synta Pharmaceuticals Corp.

Rogerio C Lilenbaum, MD (Co-Chair and Moderator)

Professor of Medicine Yale School of Medicine Chief Medical Officer Smilow Cancer Hospital Yale Cancer Center New Haven, Connecticut

Consulting Agreements: Boehringer Ingelheim Pharmaceuticals Inc, Celgene Corporation, Genentech BioOncology.

Renato G Martins, MD, MPH

Stephen H Petersdorf Endowed Chair in Cancer Care Associate Medical Director Solid Tumor Adult Oncology Seattle Cancer Care Alliance Professor, University of Washington Seattle, Washington

No relevant conflicts of interest to disclose.

Suresh S Ramalingam, MD

Professor of Hematology and Medical Oncology Director, Division of Medical Oncology Emory University Winship Cancer Institute Atlanta, Georgia

Consulting Agreements: Abbott Laboratories, AstraZeneca Pharmaceuticals LP, Bristol-Myers Squibb Company, Celgene Corporation, Genentech BioOncology, Lilly, Merck.

Gregory J Riely, MD, PhD

Associate Attending Memorial Sloan Kettering Cancer Center New York, New York

Consulting Agreement: Novartis Pharmaceuticals Corporation; **Contracted Research:** GlaxoSmithKline, Infinity Pharmaceuticals Inc, Novartis Pharmaceuticals Corporation, Pfizer Inc, Roche Laboratories Inc, Takeda Oncology.

Mark A Socinski, MD (Co-Chair and Moderator)

Executive Medical Director Member, Thoracic Oncology Program Florida Hospital Cancer Institute Orlando, Florida

Advisory Committee: Bristol-Myers Squibb Company, Daiichi Sankyo Inc, Lilly; Contracted Research: Bayer HealthCare Pharmaceuticals, Boehringer Ingelheim Pharmaceuticals Inc, Bristol-Myers Squibb Company, Celgene Corporation, Genentech BioOncology, GlaxoSmithKline, Lilly, Merck, Novartis Pharmaceuticals Corporation, Pfizer Inc, Roche Laboratories Inc, Synta Pharmaceuticals Corp; **Speakers Bureau:** Celgene Corporation, Genentech BioOncology.

David R Spigel, MD

Program Director, Lung Cancer Research Sarah Cannon Research Institute Nashville, Tennessee **Advisory Committee:** Bristol-Myers Squibb Company, Celgene Corporation, Genentech BioOncology, Lilly, Novartis Pharmaceuticals Corporation, Pfizer Inc, Roche Laboratories Inc; **Consulting Agreement:** AstraZeneca Pharmaceuticals LP.

Everett E Vokes, MD

John E Ultmann Professor Chairman, Department of Medicine Physician-in-Chief University of Chicago Medicine and Biological Sciences Chicago, Illinois

Advisory Committee: AbbVie Inc, Amgen Inc, AstraZeneca Pharmaceuticals LP, Boehringer Ingelheim Pharmaceuticals Inc, Celgene Corporation, Clovis Oncology, Eisai Inc, GeneCentric Diagnostics Inc, Genentech BioOncology, Lilly, Merck, Synta Pharmaceuticals Corp, Transgene, VentiRx Pharmaceuticals Inc.

MODERATOR AND CO-CHAIR - Dr Love is president and CEO of Research To Practice, which receives funds in the form of educational grants to develop CME activities from the following commercial interests: AbbVie Inc, Amgen Inc, Array BioPharma Inc. Astellas Pharma Global Development Inc, AstraZeneca Pharmaceuticals LP, Baxalta Inc, Bayer HealthCare Pharmaceuticals, Biodesix Inc, bioTheranostics Inc, Boehringer Ingelheim Pharmaceuticals Inc, Boston Biomedical Pharma Inc, Bristol-Myers Squibb Company, Celgene Corporation, Clovis Oncology, CTI BioPharma Corp. Daiichi Sankyo Inc, Dendreon Pharmaceuticals Inc, Eisai Inc, Exelixis Inc, Foundation Medicine, Genentech BioOncology, Genomic Health Inc, Gilead Sciences Inc, ImmunoGen Inc, Incyte Corporation, Janssen Biotech Inc, Jazz Pharmaceuticals Inc, Lilly, Medivation Inc, Merck, Merrimack Pharmaceuticals Inc, Myriad Genetic Laboratories Inc, NanoString Technologies, Natera Inc, Novartis Pharmaceuticals Corporation, Novocure, Onyx Pharmaceuticals, an Amgen subsidiary, Pharmacyclics LLC, an AbbVie Company, Prometheus Laboratories Inc, Regeneron Pharmaceuticals, Sanofi, Seattle Genetics, Sigma-Tau Pharmaceuticals Inc, Sirtex Medical Ltd, Spectrum Pharmaceuticals Inc, Taiho Oncology Inc, Takeda Oncology, Teva Oncology, Tokai Pharmaceuticals Inc and VisionGate Inc.

RESEARCH TO PRACTICE STAFF AND EXTERNAL

REVIEWERS — The scientific staff and reviewers for Research To Practice have no relevant conflicts of interest to disclose.

This educational activity contains discussion of published and/ or investigational uses of agents that are not indicated by the Food and Drug Administration. Research To Practice does not recommend the use of any agent outside of the labeled indications. Please refer to the official prescribing information for each product for discussion of approved indications, contraindications and warnings. The opinions expressed are those of the presenters and are not to be construed as those of the publisher or grantors. This activity is supported by educational grants from Astellas Pharma Global Development Inc, AstraZeneca Pharmaceuticals LP, Bayer HealthCare Pharmaceuticals, Boehringer Ingelheim Pharmaceuticals Inc, Bristol-Myers Squibb Company, Celgene Corporation, Clovis Oncology, Genentech BioOncology, Lilly, Natera Inc and Novartis Pharmaceuticals Corporation.

Hardware/Software Requirements:

A high-speed Internet connection A monitor set to 1280 x 1024 pixels or more Internet Explorer 7 or later, Firefox 3.0 or later, Chrome, Safari 3.0 or later Adobe Flash Player 10.2 plug-in or later Adobe Acrobat Reader (Optional) Sound card and speakers for audio

Last review date: July 2016

Expiration date: July 2017

Select Publications

Keynote: What every clinician needs to know to care for patients receiving immunotherapy

Julie R Brahmer, MD

Borghaei H et al. Nivolumab versus docetaxel in advanced nonsquamous non-small-cell lung cancer. *N Engl J Med* 2015;373(17):1627-39.

Brahmer J et al. **Nivolumab versus docetaxel in advanced squamous-cell non-small-cell lung cancer.** *N Engl J Med* 2015;373(2):123-35.

Brahmer JR et al. Safety and activity of anti-PD-L1 antibody in patients with advanced cancer. *N Engl J Med* 2012;366(26):2455-65.

Garon EB et al; KEYNOTE-001 Investigators. **Pembrolizumab for the treatment of non-small-cell lung cancer.** *N Engl J Med* 2015;372(21):2018-28.

Gettinger SN et al. Overall survival and long-term safety of nivolumab (anti-programmed death 1 antibody, BMS-936558, ONO-4538) in patients with previously treated advanced non-small-cell lung cancer. *J Clin Oncol* 2015;33(18):2004-12.

Grande C et al. Docetaxel-induced interstitial pneumonitis following non-small-cell lung cancer treatment. *Clin Transl Oncol* 2007;9(9):578-81.

Herbst RS et al. Pembrolizumab versus docetaxel for previously treated, PD-L1-positive, advanced non-small-cell lung cancer (KEYNOTE-010): A randomised controlled trial. *Lancet* 2016;387(10027):1540-50.

Herbst RS et al. **Predictive correlates of response to the anti-PD-L1 antibody MPDL3280A in cancer patients.** *Nature* 2014;515(7528):563-7.

Herbst RS et al. A study of MPDL3280A, an engineered PD-L1 antibody in patients with locally advanced or metastatic tumors. *Proc ASCO* 2013; Abstract 3000.

Hochstrasser A et al. Interstitial pneumonitis after treatment with pemetrexed: A rare event? Chemotherapy 2012;58(1):84-8.

Horn L et al. Clinical activity, safety and predictive biomarkers of the engineered antibody MPDL3280A (anti-PDL1) in non-small cell lung cancer (NSCLC): Update from a phase la study. *Proc ASCO* 2015; Abstract 8029.

Inoue A et al. Radiation pneumonitis in lung cancer patients: A retrospective study of risk factors and the long-term prognosis. *Int J Radiat Oncol Biol Phys* 2001;49(3):649-55.

Johnson DB, Sosman JA. Therapeutic advances and treatment options in metastatic melanoma. JAMA Oncol 2015;1(3):380-6.

Konishi J et al. Analysis of the response and toxicity to gefitinib of non-small cell lung cancer. *Anticancer Res* 2005;25(1B):435-41.

Liu V et al. Pulmonary toxicity associated with erlotinib. Chest 2007;132(3):1042-4.

Pardoll DM. The blockade of immune checkpoints in cancer immunotherapy. Nat Rev Cancer 2012;12(4):252-64.

Patnaik A et al. Phase I study of MK-3475 (anti-PD-1 monoclonal antibody) in patients with advanced solid tumors. Proc ASCO 2012; Abstract 2512.

Ribas A. Tumor immunotherapy directed at PD-1. N Engl J Med 2012;366(26):2517-9.

Rizvi NA et al. Safety and clinical activity of MEDI4736, an anti-programmed cell death-ligand 1 (PD-L1) antibody, in patients with non-small cell lung cancer (NSCLC). *Proc ASCO* 2015; Abstract 8032.

Roychowdhury DF et al. A report on serious pulmonary toxicity associated with gemcitabine-based therapy. *Invest New Drugs* 2002;20(3):311-5.

Segal NH et al. Preliminary data from a multi-arm expansion study of MEDI4736, an anti-PD-L1 antibody. *Proc ASCO* 2014; Abstract 3002.

Sharma P, Allison JP. The future of immune checkpoint therapy. Science 2015;348(6230):56-61.

Spigel DR et al. Clinical activity and safety from a phase II study (FIR) of MPDL3280A (anti-PDL1) in PD-L1-selected patients with non-small cell lung cancer (NSCLC). *Proc ASCO* 2015; Abstract 8028.

Topalian SL et al. Safety, activity, and immune correlates of anti-PD-1 antibody in cancer. *N Engl J Med* 2012;366(26):2443-54.

Topalian SL et al. Targeting the PD-1/B7-H1(PD-L1) pathway to activate anti-tumor immunity. *Curr Opin Immunol* 2012;24(2):207-12.

Villaruz LC et al. Immunotherapy in lung cancer. Transl Lung Cancer Res 2014;3(1):2-14.

Module 1: EGFR Mutation-Positive Disease

Corey J Langer, MD

Kato T et al. Erlotinib plus bevacizumab (EB) versus erlotinib alone (E) as first-line treatment for advanced EGFR mutationpositive nonsquamous non-small cell lung cancer (NSCLC): An open-label randomized trial. *Proc ASCO* 2014; Abstract 8005.

Lacouture ME et al; MASCC Skin Toxicity Study Group. Clinical practice guidelines for the prevention and treatment of EGFR inhibitor-associated dermatologic toxicities. *Support Care Cancer* 2011;19(8):1079-95.

Lee JS et al. A randomized Phase III study of gefitinib (IRESSATM) versus standard chemotherapy (gemcitabine plus cisplatin) as a first-line treatment for never-smokers with advanced or metastatic adenocarcinoma of the lung. *Proc WCLC* 2009. No abstract available

Maemondo M et al; North-East Japan Study Group. **Gefitinib or chemotherapy for non-small-cell lung cancer with mutated EGFR.** *N Engl J Med* 2010;362(25):2380-8.

Mitsudomi T et al; West Japan Oncology Group. Gefitinib versus cisplatin plus docetaxel in patients with non-small-cell lung cancer harbouring mutations of the epidermal growth factor receptor (WJTOG3405): An open label, randomised phase 3 trial. *Lancet Oncol* 2010;11(2):121-8.

Mok TS et al. Gefitinib or carboplatin-paclitaxel in pulmonary adenocarcinoma. N Engl J Med 2009;361(10):947-57.

Park K et al. Afatinib (A) vs gefitinib (G) as first-line treatment for patients (pts) with advanced non-small cell lung cancer (NSCLC) harboring activating EGFR mutations: Results of the global, randomized, open-label, Phase IIb trial LUX-Lung 7 (LL7). *Proc ESMO Asia* 2015; Abstract LBA2_PR.

Rosell R et al. Erlotinib versus chemotherapy (CT) in advanced non-small cell lung cancer (NSCLC) patients (p) with epidermal growth factor receptor (EGFR) mutations: Interim results of the European Erlotinib Versus Chemotherapy (EURTAC) phase III randomized trial. *Proc ASCO* 2011; Abstract 7503.

Wu YL et al. LUX-Lung 6: A randomized, open-label, phase III study of afatinib (A) versus gemcitabine/cisplatin (GC) as firstline treatment for Asian patients (pts) with EGFR mutation-positive (EGFR M+) advanced adenocarcinoma of the lung. *Proc ASCO* 2013;Abstract 8016.

Yang JCH et al. Overall survival (OS) in patients (pts) with advanced non-small cell lung cancer (NSCLC) harboring common (Del19/L858R) epidermal growth factor receptor mutations (EGFR mut): Pooled analysis of two large open-label phase III studies (LUX-Lung 3 [LL3] and LUX-Lung 6 [LL6]) comparing afatinib with chemotherapy (CT). *Proc ASCO* 2014;Abstract 8004.

Yang JCH et al. LUX-Lung 3: A randomized, open-label, phase III study of afatinib versus pemetrexed and cisplatin as firstline treatment for patients with advanced adenocarcinoma of the lung harboring EGFR-activating mutations. *Proc ASCO* 2012; Abstract LBA7500.

Zhou C et al. Efficacy results from the randomised phase III OPTIMAL (CTONG 0802) study comparing first-line erlotinib versus carboplatin (CBDCA) plus gemcitabine (gem), in Chinese advanced non-small-cell lung cancer (NSCLC) patients (pts) with EGFR activating mutations. *Proc ESMO* 2010;Abstract LBA13.

Gregory J Riely, MD, PhD

Karlovich C et al. Assessment of EGFR mutation status in matched plasma and tumor tissue of NSCLC patients from a Phase I study of rociletinib (CO-1686). *Clin Cancer Res* 2016; [Epub ahead of print].

Park K et al. First-line erlotinib therapy until and beyond response evaluation criteria in solid tumors progression in Asian patients with epidermal growth factor receptor mutation-positive non-small-cell lung cancer: The ASPIRATION study. *JAMA* Oncol 2016;2(3):305-12.

Soria J et al. Gefitinib/chemotherapy vs chemotherapy in EGFR mutation-positive NSCLC resistant to first-line gefitinib: IMPRESS T790M subgroup analysis. *Proc WCLC* 2015;Abstract ORAL17.08.

Soria JC et al. Gefitinib plus chemotherapy versus placebo plus chemotherapy in EGFR-mutation-positive non-small-cell lung cancer after progression on first-line gefitinib (IMPRESS): A phase 3 randomised trial. *Lancet Oncol* 2015;16(8):990-8.

Weickhardt AJ et al. Local ablative therapy of oligoprogressive disease prolongs disease control by tyrosine kinase inhibitors in oncogene-addicted non-small-cell lung cancer. *J Thorac Oncol* 2012;7(12):1807-14.

Yang JCH et al. LUX-Lung 3: A randomized, open-label, phase III study of afatinib versus pemetrexed and cisplatin as firstline treatment for patients with advanced adenocarcinoma of the lung harboring EGFR-activating mutations. *Proc ASCO* 2012; Abstract LBA7500. Yu HA et al. Analysis of tumor specimens at the time of acquired resistance to EGFR-TKI therapy in 155 patients with EGFRmutant lung cancers. *Clin Cancer Res* 2013;19(8):2240-7.

Yu HA et al. Local therapy with continued EGFR tyrosine kinase inhibitor therapy as a treatment strategy in EGFRmutant advanced lung cancers that have developed acquired resistance to EGFR tyrosine kinase inhibitors. *J Thorac Oncol* 2013;8(3):346-51.

Suresh S Ramalingam, MD

Costa DB, Kobayashi SS. Whacking a mole-cule: Clinical activity and mechanisms of resistance to third generation EGFR inhibitors in EGFR mutated lung cancers with EGFR-T790M. *Transl Lung Cancer Res* 2015;4(6):809-15.

Goss GD et al. AZD9291 in pre-treated patients with T790M positive advanced non-small cell lung cancer (NSCLC): Pooled analysis from two Phase II studies. *Proc ECC* 2015; Abstract 3113.

Janne PA et al. Clinical activity of the mutant-selective EGFR inhibitor AZD9291 in patients (pts) with EGFR inhibitor-resistant non-small cell lung cancer (NSCLC). *Proc ASCO* 2014; Abstract 8009.

Niederst MJ et al. The allelic context of the C797S mutation acquired upon treatment with third-generation EGFR inhibitors impacts sensitivity to subsequent treatment strategies. *Clin Cancer Res* 2015;21(17):3924-33.

Oxnard GR et al. Mechanisms of acquired resistance to AZD9291 in EGFR T790M positive lung cancer. *Proc WCLC* 2015; Abstract ORAL17.07.

Oxnard GR et al. Preliminary results of TATTON, a multi-arm phase lb trial of AZD9291 combined with MEDI4736, AZD6094 or selumetinib in EGFR-mutant lung cancer. *Proc ASCO* 2015; Abstract 2509.

Ramalingam SS et al. AZD9291, a mutant-selective EGFR inhibitor, as first-line treatment for EGFR mutation-positive advanced non-small cell lung cancer (NSCLC): Results from a phase 1 expansion cohort. *Proc ASCO* 2015; Abstract 8000.

Soria JC et al. Interim phase 2 results of study CO-1686-008: A phase 1/2 study of the irreversible, mutant selective, EGFR inhibitor rociletinib (CO-1686) in patients with advanced non small cell lung cancer. *Proc ENA* 2014; Abstract 10LBA.

Yu HA et al. Analysis of tumor specimens at the time of acquired resistance to EGFR-TKI therapy in 155 patients with EGFRmutant lung cancers. *Clin Cancer Res* 2013;19(8):2240-7.

Julie R Brahmer, MD

Borghaei H et al. Nivolumab versus docetaxel in advanced nonsquamous non-small-cell lung cancer. N Engl J Med 2015;373(17):1627-39.

Dempke WC et al. Brain metastases in NSCLC — Are TKIs changing the treatment strategy? *Anticancer Res* 2015;35(11):5797-806.

Herbst RS et al. **Pembrolizumab versus docetaxel for previously treated, PD-L1-positive, advanced non-small-cell lung cancer** (KEYNOTE-010): A randomised controlled trial. *Lancet* 2016;387(10027):1540-50.

Janjigian YY et al. Dual inhibition of EGFR with afatinib and cetuximab in kinase inhibitor-resistant EGFR-mutant lung cancer with and without T790M mutations. *Cancer Discov* 2014;4(9):1036-45.

Kim D et al. Preclinical evidence and clinical cases of AZD9291 activity in EGFR-mutant non-small cell lung cancer (NSCLC) brain metastases (BM). *Proc ESMO* 2014; Abstract 456P.

Piotrowska Z, Sequist LV. Epidermal growth factor receptor-mutant lung cancer: New drugs, new resistance mechanisms, and future treatment options. *Cancer J* 2015;21(5):371-7.

Welsh JW et al. Phase II trial of erlotinib plus concurrent whole-brain radiation therapy for patients with brain metastases from non-small-cell lung cancer. *J Clin Oncol* 2013;31(7):895-902.

Module 2: EML4-ALK, ROS1, BRAF and Other Potentially Targetable Mutations

Leora Horn, MD, MSc

Lovly CM et al. Routine multiplex mutational profiling of melanomas enables enrollment in genotype-driven therapeutic trials. *PLoS One* 2012;7(4):e35309.

Su Z et al. A platform for rapid detection of multiple oncogenic mutations with relevance to targeted therapy in non-small-cell lung cancer. *J Mol Diagn* 2011;13(1):74-84.

Gregory J Riely, MD, PhD

Bauer T et al. Clinical activity and safety of the ALK/ROS1 TK inhibitor PF-06463922 in advanced NSCLC. Proc WCLC 2015; Abstract ORAL33.07.

Doebele RC et al. Mechanisms of resistance to crizotinib in patients with ALK gene rearranged non-small cell lung cancer. *Clin Cancer Res* 2012;18(5):1472-82.

Gettinger SN et al. Brigatinib (AP26113) efficacy and safety in ALK+ NSCLC: Phase 1/2 trial results. *Proc WCLC* 2015; Abstract ORAL33.06.

Ou SI et al. Efficacy and safety of the ALK inhibitor alectinib in ALK+ non-small-cell lung cancer (NSCLC) patients who have failed prior crizotinib: An open-label, single-arm, global phase 2 study (NP28673). *Proc ASCO* 2015; Abstract 8008.

Sakamoto H et al. CH5424802, a selective ALK inhibitor capable of blocking the resistant gatekeeper mutant. *Cancer Cell* 2011;19(5):679-90.

Shaw AT et al. Alectinib in ALK-positive, crizotinib-resistant, non-small-cell lung cancer: A single-group, multicentre, phase 2 trial. *Lancet Oncol* 2016;17(2):234-42.

Shaw AT et al. Ceritinib in ALK-rearranged non-small-cell lung cancer. N Engl J Med 2014;370(13):1189-97.

Solomon BJ et al. First-line crizotinib versus chemotherapy in ALK-positive lung cancer. N Engl J Med 2014;371(23):2167-77.

Zou HY et al. **PF-06463922**, an **ALK/ROS1** inhibitor, overcomes resistance to first and second generation ALK inhibitors in preclinical models. *Cancer Cell* 2015;28(1):70-81.

David R Spigel, MD

Drilon A et al. Broad, hybrid capture-based next-generation sequencing identifies actionable genomic alterations in lung adenocarcinomas otherwise negative for such alterations by other genomic testing approaches. *Clin Cancer Res* 2015;21(16):3631-9.

Holderfield M et al. Targeting RAF kinases for cancer therapy: BRAF-mutated melanoma and beyond. *Nat Rev Cancer* 2014;14(7):455-67.

Kohno T et al. Beyond ALK-RET, ROS1 and other oncogene fusions in lung cancer. Transl Lung Cancer Res 2015;4(2):156-64.

Kris MG et al. Using multiplexed assays of oncogenic drivers in lung cancers to select targeted drugs. *JAMA* 2014;311(19):1998-2006.

Neal JW et al. A randomized phase 2 trial of cabozantinib, erlotinib or the combination as 2nd or 3rd line therapy in EGFR wild-type NSCLC: ECOG-ACRIN E1512. *Proc WCLC* 2015:Abstract MINI30.04.

Nguyen-Ngoc T et al. **BRAF alterations as therapeutic targets in non-small-cell lung cancer.** *J Thorac Oncol* 2015;10(10):1396-403.

Planchard D et al. Interim results of phase II study BRF113928 of dabrafenib in BRAF V600E mutation-positive non-small cell lung cancer (NSCLC) patients. *Proc ASCO* 2013; Abstract 8009.

Renato G Martins, MD, MPH

Bergethon K et al. ROS1 rearrangements define a unique molecular class of lung cancers. J Clin Oncol 2012;30(8):863-70.

Camidge DR et al. Efficacy and safety of crizotinib in patients with advanced *c-MET*-amplified non-small cell lung cancer (NSCLC). *Proc ASCO* 2014; Abstract 8001.

Frampton GM et al. Activation of MET via diverse exon 14 splicing alterations occurs in multiple tumor types and confers clinical sensitivity to MET inhibitors. *Cancer Discov* 2015;5(8):850-9.

Goldman JW et al. Treatment rationale and study design for the JUNIPER study: A randomized phase III study of abemaciclib with best supportive care versus erlotinib with best supportive care in patients with stage IV non-small-cell lung cancer with a detectable KRAS mutation whose disease has progressed after platinum-based chemotherapy. *Clin Lung Cancer* 2016;17(1):80-4.

Katayama R et al. **Cabozantinib overcomes crizotinib resistance in ROS1 fusion-positive cancer.** *Clin Cancer Res* 2015;21(1):166-74.

Rooney M et al. Genomics of squamous cell lung cancer. Oncologist 2013;18(6):707-16.

Shaw AT et al. Crizotinib in ROS1-rearranged non-small-cell lung cancer. N Engl J Med 2014;371(21):1963-71.

Module 3: Management of Metastatic Disease with No Identifiable Tumor Mutations

Corey J Langer, MD

Garon EB et al. Ramucirumab plus docetaxel versus placebo plus docetaxel for second-line treatment of stage IV non-small-cell lung cancer after disease progression on platinum-based therapy (REVEL): A multicentre, double-blind, randomised phase 3 trial. *Lancet* 2014;384(9944):556-73.

Herbst R. A randomized, phase III study comparing carboplatin/paclitaxel or carboplatin/paclitaxel/bevacizumab with or without concurrent cetuximab in patients with advanced non-small cell lung cancer (NSCLC): SWOG S0819. *Proc WCLC* 2015;Abstract PLEN04.01.

Hirsch FR et al. Increased EGFR gene copy number detected by fluorescent in situ hybridization predicts outcome in nonsmall-cell lung cancer patients treated with cetuximab and chemotherapy. *J Clin Oncol* 2008;26(20):3351-7.

Perol M et al. **REVEL:** A randomized, double-blind, phase III study of docetaxel (DOC) and ramucirumab (RAM; IMC-1121B) versus DOC and placebo (PL) in the second-line treatment of stage IV non-small cell lung cancer (NSCLC) following disease progression after one prior platinum-based therapy. *Proc ASCO* 2014; Abstract LBA8006.

Pirker R et al. Cetuximab plus chemotherapy in patients with advanced non-small-cell lung cancer (FLEX): An open-label randomised phase III trial. *Lancet* 2009;373(9674):1525-31.

Reck M et al. Overall survival with cisplatin-gemcitabine and bevacizumab or placebo as first-line therapy for nonsquamous non-small-cell lung cancer: Results from a randomised phase III trial (AVAiL). *Ann Oncol* 2010;21(9):1804-9.

Reck M et al. Phase III trial of cisplatin plus gemcitabine with either placebo or bevacizumab as first-line therapy for nonsquamous non-small-cell lung cancer: AVAil. J Clin Oncol 2009;27(8):1227-34.

Sandler A et al. Paclitaxel-carboplatin alone or with bevacizumab for non-small-cell lung cancer. N Engl J Med 2006;355(24):2542-50.

Thatcher N et al. Necitumumab plus gemcitabine and cisplatin versus gemcitabine and cisplatin alone as first-line therapy in patients with stage IV squamous non-small-cell lung cancer (SQUIRE): An open-label, randomised, controlled phase 3 trial. *Lancet Oncol* 2015;16(7):763-74.

Renato G Martins, MD, MPH

Brugger W et al. Prospective molecular marker analyses of EGFR and KRAS from a randomized, placebo-controlled study of erlotinib maintenance therapy in advanced non-small-cell lung cancer. *J Clin Oncol* 2011;29(31):4113-20.

Cappuzzo F et al. Erlotinib as maintenance treatment in advanced non-small-cell lung cancer: A multicentre, randomised, placebo-controlled phase 3 study. *Lancet Oncol* 2010;11(6):521-9.

Clark GM et al. Smoking history and epidermal growth factor receptor expression as predictors of survival benefit from erlotinib for patients with non-small-cell lung cancer in the National Cancer Institute of Canada Clinical Trials Group study BR.21. *Clin Lung Cancer* 2006;7(6):389-94.

Garassino MC et al. Erlotinib versus docetaxel as second-line treatment of patients with advanced non-small-cell lung cancer and wild-type EGFR tumours (TAILOR): A randomised controlled trial. *Lancet Oncol* 2013;14(10):981-8.

Gregorc V et al. Predictive value of a proteomic signature in patients with non-small-cell lung cancer treated with second-line erlotinib or chemotherapy (PROSE): A biomarker-stratified, randomised phase 3 trial. *Lancet Oncol* 2014;15(7):713-21.

Shepherd FA et al. Erlotinib in previously treated non-small-cell lung cancer. N Engl J Med 2005;353(2):123-32.

Soria JC et al. Afatinib versus erlotinib as second-line treatment of patients with advanced squamous cell carcinoma of the lung (LUX-Lung 8): An open-label randomised controlled phase 3 trial. *Lancet Oncol* 2015;16(8):897-907.

Mark A Socinski, MD

Lindeman NI et al. Molecular testing guideline for selection of lung cancer patients for EGFR and ALK tyrosine kinase inhibitors: Guideline from the College of American Pathologists, International Association for the Study of Lung Cancer, and Association for Molecular Pathology. Available at: http://www.archivesofpathology.org/doi/pdf/10.5858/arpa.2012-0720-0A.

Sandler AB et al. Randomized phase II/III trial of paclitaxel (P) plus carboplatin (C) with or without bevacizumab (NSC #704865) in patients with advanced non-squamous non-small cell lung cancer (NSCLC): An Eastern Cooperative Oncology Group (ECOG) Trial - E4599. *J Clin Oncol* 2005;23(16S):LBA4.

Scagliotti GY et al. Phase III study comparing cisplatin plus gemcitabine with cisplatin plus pemetrexed in chemotherapy-naive patients with advanced-stage non-small-cell lung cancer. *J Clin Oncol* 2008;26(21):3543-51.

Socinski MA et al. Safety and efficacy analysis by histology of weekly *nab*-paclitaxel in combination with carboplatin as firstline therapy in patients with advanced non-small-cell lung cancer. *Ann Oncol* 2013;24(9):2390-6.

Thatcher N et al. Necitumumab plus gemcitabine and cisplatin versus gemcitabine and cisplatin alone as first-line therapy in patients with stage IV squamous non-small-cell lung cancer (SQUIRE): An open-label, randomised, controlled phase 3 trial. *Lancet Oncol* 2015;16(7):763-74.

Travis WD, Brambilla E, Muller-Hermelink HK, eds. *Pathology and Genetics of Tumours of the Lung, Pleura, Thymus and Heart. World Health Organization Classification of Tumours.* Lyon, France: IARC Press; 2004.

Rogerio C Lilenbaum, MD

Corre R et al. Study ESOGIA-GFPC 08-02: Phase III, randomized, multicenter trial involving subjects over age 70 with stage IV non-small cell lung cancer and comparing a "classical" strategy of treatment allocation (dual-agent therapy based on carboplatin or monotherapy with docetaxel alone), based on performance status and age, with an "optimized" strategy allocating the same treatments according to a simplified geriatric screening scale, plus a more thorough geriatric evaluation if necessary. *Proc ASCO* 2011;Abstract TPS219.

Quoix E et al. Carboplatin and weekly paclitaxel doublet chemotherapy compared with monotherapy in elderly patients with advanced non-small-cell lung cancer: IFCT-0501 randomised, phase 3 trial. *Lancet* 2011;378(9796):1079-88.

Module 4: Immune Checkpoint Inhibitors

Suresh S Ramalingam, MD

Aouthmany M et al. The natural history of halo nevi: A retrospective case series. Am Acad Dermatol 2012;67(4):582-6.

DeVita VT, Lawrence TS III, Rosenberg SA, eds. *Cancer: Principles and Practice of Oncology.* 8th ed. Philadelphia, PA: Lippin-cott Williams & Wilkins; 2008.

Keir ME et al. PD-1 and its ligands in tolerance and immunity. Annu Rev Immunol 2008;26:677-704.

Melero I et al. Evolving synergistic combinations of targeted immunotherapies to combat cancer. *Nat Rev Cancer* 2015;15(8):457-72.

Mellman I et al. Cancer immunotherapy comes of age. Nature 2011;480(7378)480-9.

Pardoll DM. The blockade of immune checkpoints in cancer immunotherapy. Nat Rev Cancer 2012;12(4):252-64.

Rizvi NA et al. Cancer immunology. Mutational landscape determines sensitivity to PD-1 blockade in non-small cell lung cancer. *Science* 2015;348(6263):124-8.

Spira AI et al. Efficacy, safety and predictive biomarker results from a randomized phase II study comparing MPDL3280A vs docetaxel in 2L/3L NSCLC (POPLAR). *Proc ASCO* 2015; Abstract 8010.

Yao S et al. Advances in targeting cell surface signalling molecules for immune modulation. *Nat Rev Drug Discov* 2013;12(2):130-46.

Julie R Brahmer, MD

Brahmer J et al. Nivolumab versus docetaxel in advanced squamous-cell non-small-cell lung cancer. *N Engl J Med* 2015;373(2):123-35.

Garon EB et al. Pembrolizumab for the treatment of non-small-cell lung cancer. N Engl J Med 2015;372(21):2018-28.

Gettinger SN et al. Overall survival and long-term safety of nivolumab (anti-programmed death 1 antibody, BMS-936558, ONO-4538) in patients with previously treated advanced non-small-cell lung cancer. *J Clin Oncol* 2015;33(18):2004-12.

Herbst RS et al. Pembrolizumab versus docetaxel for previously treated, PD-L1-positive, advanced non-small-cell lung cancer (KEYNOTE-010): A randomised controlled trial. *Lancet* 2016;387(10027):1540-50.

Herbst RS et al. KEYNOTE-010: Phase 2/3 study of pembrolizumab (MK-3475) vs docetaxel for PD-L1–positive NSCLC after platinum-based therapy. *Proc ESMO Asia* 2015; Abstract LBA3_PR.

Rizvi NA et al. Activity and safety of nivolumab, an anti-PD-1 immune checkpoint inhibitor, for patients with advanced, refractory squamous non-small-cell lung cancer (CheckMate 063): A phase 2, single-arm trial. *Lancet Oncol* 2015;16(3):257-65.

David R Spigel, MD

Borghaei H et al. Nivolumab versus docetaxel in advanced nonsquamous non-small-cell lung cancer. N Engl J Med 2015;373(17):1627-39.

Camidge R et al. Atezolizumab (MPDL3280A) combined with platinum-based chemotherapy in non-small cell lung cancer (NSCLC): A phase Ib safety and efficacy update. *Proc WCLC* 2015:Abstract ORAL02.07.

Garon EB et al. Pembrolizumab for the treatment of non-small-cell lung cancer. N Engl J Med 2015;372(21):2018-28.

Hellman MD et al. Efficacy of pembrolizumab in key subgroups of patients with advanced NSCLC. *Proc WCLC* 2015: Abstract MINIO3.05.

Spira AI et al. Efficacy, safety and predictive biomarker results from a randomized phase II study comparing MPDL3280A vs docetaxel in 2L/3L NSCLC (POPLAR). *Proc ASCO* 2015; Abstract 8010.

Leora Horn, MD, MSc

Antonia SJ et al. Phase I/II study of nivolumab with or without ipilimumab for treatment of recurrent small cell lung cancer (SCLC): CA209-032. Proc ASCO 2015; Abstract 7503.

Goldberg SB et al. Activity and safety of pembrolizumab in patients with metastatic non-small cell lung cancer with untreated brain metastases. *Proc ASCO* 2015; Abstract 8035.

Ott PA et al. Pembrolizumab (MK-3475) in patients (pts) with extensive-stage small cell lung cancer (SCLC): Preliminary safety and efficacy results from KEYNOTE-028. *Proc ASCO* 2015; Abstract 7502.

Module 5: Integrative Oncology; Burnout in Oncologists

Gary Deng, MD, PhD

Armaiz-Pena GN et al. Neuroendocrine influences on cancer progression. Brain Behav Immun 2013;30(Suppl):19-25.

Armaiz-Pena GN et al. Src activation by β-adrenoreceptors is a key switch for tumour metastasis. Nat Commun 2013;1403.

Cheuk DK et al. Acupuncture for insomnia. Cochrane Database Syst Rev 2012;Sep 12(9):CD005472.

Dhillon N et al. Phase II trial of curcumin in patients with advanced pancreatic cancer. Clin Cancer Res 2008;14(14):4491-9.

Ezzo J et al. Acupuncture-point stimulation for chemotherapy-induced nausea and vomiting. *J Clin Oncol* 2005;23(28):7188-98.

Franconi G et al. A systematic review of experimental and clinical acupuncture in chemotherapy-induced peripheral neuropathy. *Evid Based Complement Alternat Med* 2013;2013:516916.

Goldman N et al. Adenosine A1 receptors mediate local anti-nociceptive effects of acupuncture. *Nat Neurosci* 2010;13(7):883-8.

Goval M et al. Meditation programs for psychological stress and well-being: A systematic review and meta-analysis. *JAMA Intern Med* 2014;174(3):357-68.

Green McDonald P et al. **Psychoneuroimmunology and cancer: A decade of discovery, paradigm shifts, and methodological innovations.** *Brain Behav Immun* 2013;30(Suppl):1-9.

Hanahan D, Weinberg RA. Hallmarks of cancer: The next generation. Cell 2011;144(5):646-74.

Huang W et al. Characterizing acupuncture stimuli using brain imaging with FMRI — A systematic review and meta-analysis of the literature. *PLoS One* 2012;7(4):e32960.

Sivan A et al. **Commensal Bifidobacterium promotes antitumor immunity and facilitates anti-PD-L1 efficacy.** *Science* 2015;350(6264):1084-9.

Snyder A et al. Immunotherapy. Could microbial therapy boost cancer immunotherapy? *Science* 2015;350(6264):1031-2.

Thaker PH et al. Chronic stress promotes tumor growth and angiogenesis in a mouse model of ovarian carcinoma. *Nat Med* 2006;12(8):939-44.

Vétizou M et al. Anticancer immunotherapy by CTLA-4 blockade relies on the gut microbiota. *Science* 2015;350(6264):1079-84.

Vickers AJ, Linde K. Acupuncture for chronic pain. JAMA 2014;311(9):955-6.

Wu MT et al. Central nervous pathway for acupuncture stimulation: Localization of processing with functional MR imaging of the brain — preliminary experience. *Radiology* 1999;212(1):133-41.

Leora Horn, MD, MSc

Gautam M. Women in medicine: Stresses and solutions. West J Med 2001;174(1):37-41.

Maslach C, Leiter MP. The Truth About Burnout: How Organizations Cause Personal Stress and What to Do About It. San Francisco: Jossey-Bass; 1997.

Myers MF. The well-being of physician relationships. West J Med 2001;174(1):30-3.

Puddester D. The Canadian Medical Association's policy on physician health and well-being. West J Med 2001;174(1):5-7.

Shanafelt TD et al. Burnout and career satisfaction among US oncologists. J Clin Oncol 2014;32(7):678-86.

Module 6: Adjuvant and Neoadjuvant Therapy; Management of Small Cell Lung Cancer, Mesothelioma and Thymoma

Everett E Vokes, MD

Curran WJ Jr et al. Sequential vs concurrent chemoradiation for stage III non-small cell lung cancer: Randomized phase III trial RTOG 9410. J Natl Cancer Inst 2011;103(19):1452-60.

Kelly K et al. A randomized, double-blind phase 3 trial of adjuvant erlotinib (E) versus placebo (P) following complete tumor resection with or without adjuvant chemotherapy in patients (pts) with stage IB-IIIA EGFR positive (IHC/FISH) non-small cell lung cancer (NSCLC): RADIANT results. *Proc ASCO* 2014;Abstract 7501.

Wakelee HA et al. Randomized phase III trial of adjuvant chemotherapy with or without bevacizumab in resected non-small cell lung cancer (NSCLC): Results of E1505. *Proc WCLC* 2015: Abstract PLEN04.03.

Giuseppe Giaccone, MD, PhD

Alley EW et al. Clinical safety and efficacy of pembrolizumab (MK-3475) in patients with malignant pleural mesothelioma: Preliminary results from KEYNOTE-028. AACR Annual Meeting 2015; Abstract CT103.

Antonia SJ et al. Phase I/II study of nivolumab with or without ipilimumab for treatment of recurrent small cell lung cancer (SCLC): CA209-032. Proc ASCO 2015; Abstract 7503.

Ott PA et al. Pembrolizumab (MK-3475) in patients (pts) with extensive-stage small cell lung cancer (SCLC): Preliminary safety and efficacy results from KEYNOTE-028. Proc ASCO 2015; Abstract 7502.

Rudin CM et al. A DLL3-targeted ADC, rovalpituzumab tesirine, demonstrates substantial activity in a phase I study in relapsed and refractory SCLC. *Proc WCLC* 2015: Abstract ORAL10.01.

Saunders LR et al. A DLL3-targeted antibody-drug conjugate eradicates high-grade pulmonary neuroendocrine tumor-initiating cells in vivo. *Sci Transl Med* 2015;7(302);302ra136.

Thomas A et al. Sunitinib in patients with chemotherapy-refractory thymoma and thymic carcinoma: An open-label phase 2 trial. *Lancet Oncol* 2015;16(2):177-86.

Zalcman G et al. Bevacizumab 15mg/kg plus cisplatin-pemetrexed (CP) triplet versus CP doublet in malignant pleural mesothelioma (MPM): Results of the IFCT-GFPC-0701 MAPS randomized phase 3 trial. *Proc ASCO* 2015;Abstract 7500.

Module 7: Interdisciplinary Tumor Panel

David H Harpole Jr, MD

Bongers EM et al. Predictive parameters of symptomatic radiation pneumonitis following stereotactic or hypofractionated radiotherapy delivered using volumetric modulated arcs. *Radiother Oncol* 2013;109(1):95-9.

Grills IS et al. Outcomes after stereotactic lung radiotherapy or wedge resection for stage I non-small-cell lung cancer. *J Clin Oncol* 2010;28(6):928-35.

Timmerman R et al. Excessive toxicity when treating central tumors in a phase II study of stereotactic body radiation therapy for medically inoperable early-stage lung cancer. *J Clin Oncol* 2006;24(30):4833-9.

Walter J Curran Jr, MD

Bradley JD et al. Standard-dose versus high-dose conformal radiotherapy with concurrent and consolidation carboplatin plus paclitaxel with or without cetuximab for patients with stage IIIA or IIIB non-small-cell lung cancer (RTOG 0617): A randomised, two-by-two factorial phase 3 study. *Lancet Oncol* 2015;16(2):187-99.

Chang JY et al. Significant reduction of normal tissue dose by proton radiotherapy compared with three-dimensional conformal or intensity-modulated radiation therapy in Stage I or Stage III non-small-cell lung cancer. *Int J Radiat Oncol Biol Phys* 2006;65(4):1087-96.

Eaton BR et al. The effect of institutional clinical trial enrollment volume on survival of patients with stage III non-small cell lung cancer treated with chemoradiation: A report of the Radiation Therapy Oncology Group (RTOG) 0617. *Proc ASCO* 2014; Abstract 7551.

David H Harpole Jr, MD

Okada M et al. Sleeve segmentectomy for non-small cell lung carcinoma. J Thorac Cardiovasc Surg 2004;128(3):420-4.

Yang CJ et al. Wedge resection vs segmentectomy for patients with T1A NO non-small cell lung cancer. *Proc WCLC* 2015; Abstract ORAL35.02.