New Lung Cancer Navigator
Empowering patients to manage their lung cancer journey

LUNGevity Foundation is proud to announce the Lung Cancer Navigator, an innovative mobile app designed to guide lung cancer patients, their caregivers, and other members of their care team through their lung cancer experience.

Significant progress in lung cancer research is resulting in patients living longer and better lives. With more choices than ever before, they and their caregivers need reliable tools to make informed healthcare decisions.

“There’s a real need for an easy-to-use tool to help lung cancer patients and their caregivers better understand their diagnosis, educate themselves about treatment options, and communicate effectively with their doctors and other healthcare providers,” said Dr. Pierre Massion, member of LUNGevity’s Scientific Advisory Board and Director of the Cancer Early Detection and Prevention Initiative at the Vanderbilt-Ingram Cancer Center. “As a clinician, I can see that an app like the LUNGevity Lung Cancer Navigator will be very helpful to patients and their families to be more active participants in their healthcare decisions.”

The Lung Cancer Navigator allows patients and their caregivers to track appointments, treatments, medications, questions, and notes from a single location and share the information with a network that they control and define. It also provides users with all the tools they need to develop a deep and meaningful understanding of the most up-to-date lung cancer information about their diagnosis, which ultimately empowers them to be active decision makers in their treatment process. Another benefit of the app is that it enables patients to better communicate with their healthcare teams.

You can download it in early November from the App Store or Google Play. It’s FREE!

Developed through an educational grant from Bristol-Myers Squibb

LUNGevity Announces Early Detection and Lung Cancer Interception Dream Team Award

LUNGevity Foundation is excited to announce a new $6 million early detection and interception research collaboration with Stand Up To Cancer and the American Lung Association through its LUNG FORCE initiative: the SU2C-LUNGevity-American Lung Association Lung Cancer Interception Dream Team. Read all about it on page 5.
LUNGevity-Cancer Support Community Collaboration

Making Our Lung Cancer Community More Visible by Sharing Experiences

Today, new treatments mean that more people are living with lung cancer, and that creates a larger group of survivors and a great need to speak up about the issues that impact their quality of life. LUNGevity is joining with the Cancer Support Community (CSC) to build the CSC Lung Cancer Experience Registry. With the Registry, patients can join their story and their voice to those of other people who share experiences. The information learned from the Registry will be shared with the broader cancer community—physicians, other healthcare providers, policy makers, and funders—to improve programs and services for patients and caregivers.

By joining the Cancer Experience Registry you not only help yourself, you also help others. You can register or learn more by going to www.cancerexperienceregistry.org.

REFLECTIONS FROM THE PRESIDENT’S DESK

Fall is an inspiring time at LUNGevity! Breathe Deep events are happening all across the country, and we are launching new collaborations while building on our initiatives to streamline clinical trials and ensure that patients have access to molecular testing. November is Lung Cancer Awareness Month, and this year’s theme is ‘Be the spark’ of change in lung cancer.

In September, LUNGevity announced a transformational collaboration with Stand Up To Cancer and the American Lung Association on a first-of-its kind lung cancer interception Dream Team. We have also funded a new cohort of Career Development Awardees, who will ignite lung cancer research with their fresh ideas, as well as expanded our Scientific Advisory Board with the addition of five outstanding scientists and clinicians.

We are proud to launch the Lung Cancer Navigator App, a cutting-edge tool that helps lung cancer patients communicate with their entire care team while keeping track of their treatments and learning more about their diagnosis. The free app is available on Apple and Google stores, and we encourage you to download it and try it out.

Thank you for your continued support. Without you, none of these programs would be possible. Together we will create a world where no one dies of lung cancer.

Andrea Ferris
Corporate Leaders Chen and Doughtie Join LUNGevity Foundation Board of Directors

LUNGevity Foundation is excited to announce two key additions to its distinguished Board of Directors, Patrick Chen and Lynne Doughtie. Patrick and Lynne bring their extensive business expertise to support LUNGevity’s strategic growth.

Patrick Chen

Patrick Chen is the CEO of JD Capital USA. After losing his mother to lung cancer, Patrick is determined to help improve outcomes for people diagnosed with the disease. JD Capital is China’s largest private equity firm, and one of Patrick’s goals is to introduce LUNGevity to the Chinese market. Patrick was formerly a senior executive at Industrial and Commercial Bank of China (ICBC), overseeing the bank’s global M&A activities. He has also worked for Shanghai International Securities, co-heading its international division. Patrick has master’s degrees from Indiana University and the Graduate School of People’s Bank of China.

Lynne Doughtie

Lynne Doughtie, Chairman and Chief Executive Officer of KPMG LLP, one of the world’s leading professional services firms, recently lost her mother to lung cancer and is passionate about wanting to make a difference in changing outcomes for all those affected by the disease. Lynne is a Governing Board member for the Center for Audit Quality and a member of The Committee of 200. She also serves as a board member for both NAF and the Partnership for New York City. Lynne has received numerous recognitions, including being named one of: Fortune’s Most Powerful Women in Business, Accounting Today magazine’s Top 100 Most Influential People, and the National Association of Corporate Directors’ 100 most influential people in the boardroom. Lynne also was named the 2015 “Woman of Achievement” by the National Association for Female Executives.

November is Lung Cancer Awareness Month

TIPS FOR BEING A LUNG CANCER ADVOCATE

November is national Lung Cancer Awareness Month, a time to educate the public about the disease and share stories of lung cancer patients, survivors, and their families. November is also an opportunity to highlight the many ways people like YOU are making a difference.

Everyone can be the spark that changes outcomes for people living with lung cancer.

WANT TO HAVE AN IMPACT?

LUNGevity has lots of opportunities to get involved and spark change.

1. GET SOCIAL! We know you’re out there making a difference! Post your personal story showing how you’re having an impact on lung cancer outcomes on Facebook, Instagram, Pinterest, and Twitter. Did you create your own event to raise awareness and funds for lung cancer research? Are you handing out LUNGevity materials at a local health fair? Share LUNGevity posts with your network to spread the message, and use the hashtag #changelc.

2. GET ACTIVE! Join a Breathe Deep event near you and use our new mobile tools to fundraise; request LUNGevity materials to hand out in your community.

3. LEARN MORE! Read LUNGevity online blogs, sign up for our newsletters, then share with your network. Check out the website for updates and important information for patients and caregivers.

4. JOIN THE SUPPORT COMMUNITY! Find support, information, and resources through the online Survivor and Caregiver Resource Centers and Twitter chats; read our patient blogs; become a LUNGevity mentor today.

There are so many ways to have an impact. Find out more at www.LUNGevity.org.
Join Team LUNGevity

Run the 2017 Bank of America Shamrock Shuffle and/or Bank of America Chicago Marathon!

Team LUNGevity is a group of motivated, dedicated, and passionate athletes who compete in races of all kinds and distances while raising funds for LUNGevity.

The 2017 Bank of America Shamrock Shuffle 8K Race will be held on Sunday, April 2. The 2017 Bank of America Chicago Marathon will be held on Sunday, October 8. To learn more about the many benefits of joining Team LUNGevity, including a guaranteed entry into the October 2017 Bank of America Chicago Marathon, email us at teamLUNGevity@LUNGevity.org.

To see all of our endurance event options, visit www.LUNGevity.org/events/endurance-events.

We make it easy to fundraise with our on-the-go social media app!

Download our Breathe Deep App

www.LUNGevity.org
LUNGevity Advances Its Strategic Focus on the Funding of Early Detection Research

New Collaboration with Stand Up To Cancer and American Lung Association to Fund First Team to Study Lung Cancer Interception

LUNGevity Foundation has announced a new collaboration with Stand Up To Cancer and the American Lung Association through its LUNG FORCE initiative: the SU2C-LUNGevity-American Lung Association Lung Cancer Interception Dream Team. This collaboration builds on the Foundation’s more than seven years of strategic investment in lung cancer early detection research. The Dream Team will be formed through a competitive process and will be the first of its kind to focus research on lung cancer interception. The $6 million collaboration will take place over a four-year period.

Today, only 16% of people with lung cancer are diagnosed in the earliest stage, when the disease is most treatable. LUNGevity’s long-term strategic focus on early detection, and our new collaboration with Stand Up To Cancer and the American Lung Association, will maximize LUNGevity’s ongoing direct investment in critical research that can change this statistic.

As in many cancers, early detection has a significant impact on patient outcomes. Delving into the newly emerging field of lung cancer interception, the team will embark on a research project to investigate early molecular or other changes that lead to cancer development. Early detection and interception are key elements for determining effective treatment options for patients and preventing the spread of cancer to other parts of the body, ultimately resulting in increased survival.

“LUNGevity is honored to support this new Dream Team with Stand Up To Cancer and the American Lung Association to lead the way in the study of lung cancer interception,” said Andrea Ferris, President and Chairman of LUNGevity. “We applaud SU2C for their continued leadership in bringing celebrity ambassadors from the Hollywood community together with health industry leaders, patient advocates, and scientists to accomplish astounding advancements in cancer research in compressed time. It is extraordinary to see so many people stepping forward to contribute their time and talents in support of this critically important quest.”

In the coming months, SU2C, with support from its Scientific Partner, the American Association for Cancer Research, will issue a Call for Ideas, seeking interdisciplinary and multi-institutional teams of researchers to offer innovative approaches to cancer interception for lung cancer with the greatest promise for patient benefits faster. LUNGevity Foundation and the American Lung Association LUNG FORCE initiative will participate with SU2C in the evaluation and SU2C-LUNGevity-American Lung Association Lung Cancer Interception Dream Team selection.

“Stand Up To Cancer is so appreciative of the support of LUNGevity and the American Lung Association LUNG FORCE initiative as we pursue this newest approach to cancer prevention and treatment,” stated SU2C President and CEO, Sung Poblete, Ph.D., R.N. “Cancer advocates such as LUNGevity are essential in our collaborations to innovate and accelerate cancer research.”

The new collaboration was announced at the SU2C fundraising telecast on Friday, September 9. The live telecast was aired simultaneously on more than 60 broadcast and cable networks and streaming services across the United States and Canada. The show featured a stellar cast of celebrated figures from the worlds of entertainment, music, and science.

Stand Up To Cancer telecast announcing SU2C-LUNGevity-American Lung Association collaboration
The LUNGevity Career Development Awards program is fostering a new generation of outstanding lung cancer researchers who will transform the early detection and treatment of lung cancer. LUNGevity’s 2016 cohort of scientists is studying:

- How to predict which premalignant lesions will progress to squamous cell lung cancer
- How to improve the diagnosis of early-stage lung cancer
- How to make small cell lung cancer cells sensitive to chemotherapy

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**Joshua Campbell, PhD**  
Boston University  
*Developing a biomarker signature to predict development of squamous cell lung cancer*

While premalignant lesions in the airway can be detected by a technique called autofluorescence bronchoscopy, it is not currently understood why and how some of these lesions progress to squamous cell lung cancer, a type of non-small lung cancer, while others do not. An ability to identify the lesions that are going to progress before they grow to invasive cancer would allow clinicians to intervene earlier and should reduce the number of squamous cell deaths. Dr. Joshua Campbell will use DNA sequencing to identify mutations in premalignant lesions from the airways of high-risk smokers that have been sampled over time. He will determine whether the presence of types of mutations can predict progression or regression of these lesions. The ultimate goal of Dr. Campbell’s research is the development of an early-detection biomarker that will predict which premalignant lesions will go away and which will progress to cancer.

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**Lida Hariri, MD, PhD**  
Massachusetts General Hospital  
*Improving diagnosis of early-stage lung cancer with novel imaging tools*

A tissue biopsy is required to make a definitive diagnosis of lung cancer. Unfortunately, low-risk methods of biopsy, such as bronchoscopy, are often not able to adequately sample targeted nodules when they are small and/or difficult to navigate to. If a diagnosis cannot be made, patients must undergo repeat biopsy or even surgery. Dr. Lida Hariri’s project aims to dramatically improve lung cancer diagnosis with a low-risk biopsy by using a novel high-resolution imaging technique called Optical Coherence Tomography (OCT). Dr. Hariri will use OCT to perform virtual optical biopsies, ultra-sensitive imaging of early-stage lung cancers to complement the standard tissue biopsies. Her research could result in a powerful new bronchoscopy tool that could reduce unnecessary risky procedures, eliminate delays in diagnosis, and allow earlier therapy initiation.

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**Jonathan Lehman, MD, PhD**  
Vanderbilt University Medical Center  
*Understanding chemoresistance and identifying novel targets in small cell lung cancer*

Small cell lung cancer (SCLC) represents approximately 15% of all lung cancers. Chemotherapy has been the mainstay for treatment of SCLC for the past three decades. SCLC responds well to initial treatment, but recurs frequently and aggressively with the majority of patients dying within 12 months of diagnosis. No targeted therapy is available for SCLC patients. Dr. Jonathan Lehman has identified that SCLC is heterogeneous—not every cell in the cancer is the same. He has found at least two types of cells in SCLC from patients. These two types of cells respond differently to chemotherapy. Dr. Lehman will characterize these two types of cells in SCLC using a novel single-cell analysis technique called mass cytometry. His research will identify how we can better target the two cell types in order ultimately to develop targeted therapy for SCLC.

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**#GivingTuesday**

First, there was Black Friday. Then came Cyber Monday. And now, #GivingTuesday!

Please mark your calendars for Tuesday, November 29, when LUNGevity Foundation joins this global day of giving that kicks off the charitable season. #GivingTuesday celebrates and supports giving and philanthropy during the season when many of our generous donors focus on their holiday and end-of-year giving.

Visit www.LUNGevity.org on Tuesday, November 29, to make your donation!
LUNGevity Foundation Welcomes Five Outstanding Scientists to the Scientific Advisory Board

Five new members have joined LUNGevity’s Scientific Advisory Board, a group of esteemed leaders in their field who guide the organization’s research strategy and program. The new members bring their expertise in the key areas of immunotherapy, statistics, thoracic surgery, squamous cell lung cancer, and early detection.

Dr. Antonia’s work focuses on translational research, for which he uses his molecular biology and cellular background to develop immunotherapeutic strategies for lung cancer patients. His clinical interests focus on immunotherapy and immunobiology, in particular gene-modified tumor cell vaccine trials. Dr. Antonia also serves at Moffitt as chairman of the Scientific Review Committee and medical director of the Tumor Vaccine Production Facility.

Dr. Dahlberg’s research focuses on clinical and translational studies in lung cancer as the primary statistician for both the ECOG-ACRIN Thoracic Committee and the Thoracic Oncology Program at Dana-Farber Cancer Institute. She is a member of the NCI Thoracic Malignancy Steering Committee, the NCTN Core Correlative Sciences Committee, and the Nature journals statistical consultants group.

Dr. Paik’s research focuses on squamous cell lung cancer biology, targeted therapeutics, and translational therapies aimed at the metastatic process. He has served as a member of The Cancer Genome Atlas Squamous Cell Lung Cancer Working Group.

Dr. Vachani’s research focuses on the discovery and validation of early detection and treatment prediction biomarkers for lung cancer and mesothelioma. Additional areas of research include studies on the measurement of biomarkers from circulating tumor cells and circulating free DNA. Dr. Vachani serves on various committees for the American Thoracic Society and is the Vice-Chair of the Thoracic Oncology Network of the American College of Chest Physicians.
Improving Effectiveness of Chemotherapy in Small Cell Lung Cancer

An interview with LUNGevity Career Development Awardee John T. Poirier

John T. Poirier, PhD, studies small cell lung cancer (SCLC), which affects approximately 15% of lung cancer patients. His 2014 LUNGevity Career Development Award focuses on how SCLC cells eventually become resistant to chemotherapy, the only treatment option currently available to patients with advanced-stage SCLC. These studies are key to developing more effective therapies for people diagnosed with SCLC. We recently chatted with Dr. Poirier about his background, how this award contributed to his progress as a lung cancer scientist, and what he has learned about drug resistance in SCLC.

Why did you decide to study lung cancer?
When I started on my PhD training at Johns Hopkins University, I wasn’t sure which area I wanted to study beyond the broader context of cancer. My top priority at the time was to identify a lab where I could learn the general skills needed to be a successful researcher. Fortunately, Johns Hopkins University has a lot of cutting-edge cancer research, so I was glad to have an opportunity to train for short periods in a number of different labs to help me to choose my focus. I spent some time in Dr. Charles Rudin’s lab, and it seemed like a good fit to help me develop as a scientist. It was also exciting that my work would focus on SCLC because personal experiences had shown me how desperately patients needed more solid research in the field.

How did the LUNGevity award help you to establish yourself as a lung cancer scientist?
After my graduate training and postdoctoral fellowship, I started to think about how to develop into an independent scientist. I was expected to get research funding and publish impactful papers. The LUNGevity Career Development Award was the first large grant that I ever received, and it came at just the right time. Because of that grant, I was able to take on a high-risk, high-reward project and develop preliminary data that made it possible for me to secure additional research grants.

Using the LUNGevity grant as a springboard, our laboratory has developed a strong research program focused on SCLC biology in just a couple of years.

What was the focus of your work?
The treatments given to patients with SCLC work well initially. But almost every SCLC patient will see the cancer return, and when it returns it is usually resistant to the treatment. This is one of the main reasons that the survival rate for SCLC is so low. I wanted to try to find out why the treatments stop being effective.

I hypothesized that if the biological reason for drug resistance could be understood, it would give us a handle on the problem that could potentially lead to finding a way to make these medicines effective again, and eventually improving the survival rates for SCLC. We developed a series of laboratory techniques to study SCLC tumors before and after they became resistant to chemotherapy, or chemoresistant. This is a very powerful tool for discovery because it allows us to compare proteins, DNA, and other biological characteristics to determine what has changed in the tumors that are resistant to treatment.

What did we learn from your research?
Scientists know that our normal, healthy cells are good at repairing DNA damage. And we also know that cancer cells are not as good at repairing DNA damage. This difference in the ability to repair DNA forms the basis for why SCLC patients are typically treated with drugs that damage DNA. When we damage enough DNA in the cancer cells, they cannot repair the DNA and the tumor cells begin to die off.

Our research suggests that tumor cells may develop changes that allow them to improve their ability to repair the DNA damage caused by cancer treatments. We are now narrowing down which of these changes are most likely to be causing drug resistance in the SCLC patients, with the hope of being able to prevent or reverse this change.

What are the next steps in your research?
We will continue to use these findings to study drug resistance in SCLC tumors. Our next goal will be to identify chemical compounds that re-sensitize chemoresistant SCLC tumors to DNA damage. If that is successful, we will work toward conducting clinical trials that aim to reverse chemoresistance in SCLC patients. My hope is that these findings will ultimately lead to a treatment protocol that overcomes drug resistance and improves the survival rates for SCLC patients.
Thank you to the walkers, runners, and volunteers who have participated in Breathe Deep events and on Team LUNGevity in 2016!

2016 Breathe Deep and Team LUNGevity events pictured here

1) Columbus, OH
2) Naperville, IL
3) Team LUNGevity—Great Wall of China
4) Cleveland, OH
5) Seattle, WA
6) Columbia, MD
7) Boca Raton, FL
8) Kingston, PA
9) Philadelphia, PA
10) Birmingham, MI
11) Kankakee, IL
12) South Lyon, MI
Why We Give

An interview with Rosemary M.M. Marquardt

photo: Rosemary Marquardt (lower left), the late Kathy Norton (lower right), and family

Rosemary Marquardt and her husband, James, are major donors to LUNGevity and are the Dinner Chairs for the Celebration of Hope Gala in New York on November 9, 2016. Through the Gala, they are raising vital funds for lung cancer research.

Q: How did you first become involved with LUNGevity?

RMMM: My oldest daughter, Kathy, lost her battle with lung cancer in November 2013. She was 53 years old—a wife, mother of two daughters, and one of the loveliest and most inclusive people you could know. Our connection with LUNGevity and [President and Chairman of the Board] Andrea Ferris happened by chance, as some would think, but I believe all this happened for a purpose. We met at a family dinner at a local restaurant. The owner, who went to high school with Kathy’s sibling, happened to be friends with Andrea. Thus, LUNGevity became an integral part of our lives.

Q: What impact do you hope your involvement will have?

RMMM: A great awareness of lung cancer—its impact on families—and the importance of research for this cancer that affects one in fifteen in their lifetime.

Q: What is your philosophy of giving?

RMMM: I was blessed with exemplary parents who taught their five kids that doing and giving to others was the only way to travel on this journey of life. Hopefully, I have instilled that in my four children as well.

Q: What do you believe would most transform the lung cancer community?

RMMM: I believe success is around the corner—new treatments like immunotherapy make sense to me. Finding a way to detect lung cancer early will make the greatest difference. For now, everyone should know the symptoms and be vigilant.

Q: Anything to add?

RMMM: Every one of us has a favorite charity—the one that touches our hearts and pushes us to make a difference. Mine is LUNGevity.

Why I Volunteer

An interview with Kristin Black, Team Captain of Breathe Deep DC’s “Walking for Jenny and Earl”

photo: Jenny Chancy (left) and Kristin Black

Q: How did you first become involved with LUNGevity?

Kristin: My close friend Jenny—Major Jennifer Chancy—was in the Marines when she was deployed to Afghanistan; she came back with a cough that wouldn’t go away. This was common for returning military, so it wasn’t taken seriously by her doctors. Then, in 2011, Jenny was diagnosed with stage 4 lung cancer and put on medical leave. She returned to live with her family in Kansas.

The day she told me she had lung cancer, she said she was going to be okay. Jenny had the best attitude ever. I flew from DC to walk in LUNGevity’s Breathe Deep Kansas City event with Jenny, her friends, and her family. Jenny passed away one month later, 15 months after her initial diagnosis.

Q: How are you involved with LUNGevity today?

Kristin: I flew to Kansas City for the next year’s walk, but there was also a big group of Jenny’s friends here in DC who wanted to get involved. I started the Walking for Jenny East Coast team, and we keep in close touch with our Kansas team. Our first year in DC, the events took place in both cities on the same day! This year will be my 5th year participating in a Breathe Deep walk—our team is growing every year. I found out that a friend’s father, who was also in the military, had passed away from lung cancer, so we now walk for Jenny and Earl.

Q: What is most rewarding about leading a team?

Kristin: Keeping Jenny’s name and memory alive. We’re all together on event day, telling our Jenny stories, and we look for her photo on the big screen during the slide show. She was our “tough” friend who took everything in stride. Jenny was a fighter; we remember her life, not her illness.

Q: What impact do you hope your fundraising efforts will have?

Kristin: I hope our efforts help to find out more about the cause of lung cancer. In Jenny’s case, she was a healthy nonsmoker—a Marine! How could she have such an aggressive disease? We have to keep raising money for research to figure this out.

Q: Any last thoughts?

Kristin: I’ve met the coolest people through LUNGevity’s Breathe Deep events. These survivors are just as tough as Jenny. I want people to be there to help them and their families through lung cancer.
Survivors and caregivers came from across the United States, as well as from Brazil, Australia, and Canada, to be part of the largest national gathering of lung cancer survivors in one location. LUNGevity is honored to offer this unique, educational conference for survivors, caregivers, and advocates to connect with each other and learn how to live well with lung cancer.

What makes HOPE Summit so powerful for its attendees is the information they learn, the connections they make, and the networks they build that can bring back to engage and empower their own communities. Lung cancer survivors have the opportunity to meet with fellow survivors who may share the same mutation, have undergone similar treatments, or be from the same demographic—for example, young adults with lung cancer.

The spirit in the room is outstandingly positive and supportive as people greet past attendees, welcome new ones, and share their personal stories. Attendees leave the Summit equipped with lasting friendships and a network of support they can call on throughout the year.

Registration is now open for the 2017 National HOPE Summit, which will take place in Arlington, VA, on April 28-April 30. For more information or to register for this truly transformative event, visit www.LUNGevity.org/hope.
JOIN US DURING LUNG CANCER AWARENESS MONTH
AT THESE NOVEMBER LUNGevity EVENTS

| November 5 | Breathe Deep Boston | Somerville, MA |
| November 5 | Breathe Deep South Jersey | Pennsauken, NJ |
| November 5 | Breathe Deep NYC | New York City, NY |
| November 5 | Breathe Deep Atlanta | Atlanta, GA |
| November 6 | Breathe Deep DC | Washington, DC |
| November 6 | Breathe Deep Kansas City | Kansas City, MO |
| November 9 | LUNGevity’s Celebration of Hope Gala | New York City, NY |
| November 12 | Breathe Deep DFW | Arlington, TX |
| November 12 | Breathe Deep Busse Woods | Elk Grove Village, IL |
| November 19 | Breathe Deep Stache & Lash | Nashville, TN |
| November 19 | Breathe Deep San Diego | San Diego, CA |
| November 20 | Breathe Deep Cincinnati | Cincinnati, OH |

For additional information about events near you, visit www.LUNGevity.org/events