

Louisiana Lung Cancer Study Newsletter



Department of
Genetics

Study Updates

We have come a long way from when we first started in 1992 to where we are now in 2015. During this period, we have realized that the genetics of lung cancer is much more complex than what we could fathom 22 years ago. We know now that more than one gene or gene variants are associated with lung cancer. Earlier this year, our study found an association of an early onset Parkinson's gene, PARK2, in families with multiple cases of lung cancer (publication: Xiong et al, A Recurrent Mutation in PARK2 is Associated with Familial Lung Cancer, The American Journal of Human Genetics [2015], <http://dx.doi.org/10.1016/j.ajhg.2014.12.016>). We are investigating more about this gene and the gene variants and are determining the possibility of developing personalized medicine in individuals carrying this variant. We are hopeful that with your help we will be able to develop individualized treatment for lung cancer in future.

Greetings: We're Still Here & One More

Diptasri Mandal, PhD is the Principal Investigator of the Lung Cancer Study and Associate Professor in the Department of Genetics at LSUHSC-NO.

Angelle Bencaz, MSPH and **Jessica Chambliss, MS, CRC** are the study's Research Associates and Co-Investigators who have been working tirelessly on the study for many years.

Jasmine Thompson, BS is the newest member of our study team as of January 2015. We give her a big welcome.

Hello!

Together, we make up part of the multi-investigator, interdisciplinary team that is highly experienced in genetic epidemiology, known as the Genetic Epidemiology of Lung Cancer Consortium or GELCC (*please see last page for a complete list of all the GELCC investigators*). Our goal is to identify the susceptibility genes for lung cancer in families with multiple cases. We want you to know that we are always here to answer any questions you may have about our study. We also appreciate hearing any updates you and/or your family may have. Our hope is that we may always keep in touch with you and provide you with the latest lung cancer study updates.

Are You "Lunging" for Some Lung Cancer Answers?

What is the finding of our lung cancer research so far? Our studies to date suggest that risk variants (risk alleles in genes) with large effect on lung cancer risk do exist in the population and that they may interact with smoking such that carriers of these risk variants might need to smoke much less than other people to have a very high risk of lung cancer.

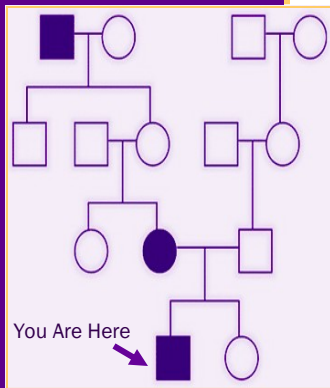
What does our research finding mean to people who have lung cancer now? We are doing further investigation on the genes that we have identified so far, such as RSG17 and PARK2. However, evaluating if there is a possibility of developing targeted therapy based on these findings may take years.

Can I (or my family member) now find out if I have the gene that will cause lung cancer? Unfortunately, there is not yet any test available to determine if an individual has a large increased risk of developing lung cancer. Turn to the bottom of page 2 if you would like to learn more about this topic.

I am a smoker; I'm 59 and started when I was 12. I have a history of lung cancer in my family. What should I do to prevent cancer? Having a family history of lung cancer does increase, to some degree, your risk for developing lung cancer. The best thing to do is to stop smoking. Although, you do not have to be a smoker to develop lung cancer. Research suggests that 'hereditary' lung cancer is higher in non-smoking females with an early age of onset (diagnosed before age 60). We are working hard to learn more to prevent this disease someday.



If you know someone who has been diagnosed with lung cancer or wants to participate as a control, please share our research study information with them. If you would like to get in touch with us, please use our toll-free number **1-888-720-7757** or email us at **LungCaStudy@lsuhsc.edu**. Please visit our website at **<http://www.medschool.lsu.edu/lungcancer>** for more information and updates.



Above: A Family Tree or Pedigree

“A person’s risk increases by 8-10% if he or she has siblings with lung cancer and by 25% if the parents have lung cancer.”

“There is more than one gene responsible for lung cancer...”



What’s Family Got To Do With It?

You may have heard somewhere that some diseases, such as certain cancers, run in the family. Well, it’s true! Families do after all share their genes, so I guess you could say their susceptibility to [lung] cancer can be passed down from generation to generation. Families also share their environment and behaviors in addition to their genes. Research suggests that there is a genetic susceptibility to developing lung cancer and that interactions between genes and the environment are very important. A person with a blood relative who has been diagnosed with lung cancer may be at an increased risk for also developing lung cancer. A person’s risk increases by 8-10% if he or she has siblings with lung cancer and by 25% if the parents have lung cancer. Family history is important to your health. Participating in our study may give you the

opportunity to gain further knowledge about your own family’s medical history, and in turn, take a more active role in important health decisions outside of the study. We attempt to gather from you as much family information as we can in order to create a pedigree, or what is commonly referred to as a family tree. It is helpful by showing at least three generations and including major medical conditions, age of disease onset, cause of death and age of death. By creating a pedigree, you can assess your risks for developing lung cancer and, if necessary, undertake preventative strategies like cancer screenings or lifestyle changes. Knowing the health history of your family may also help your doctor provide you with better overall health management. With all that said, the Lung Cancer Study encourages everyone to learn more about their family

history. For instance, ask questions; take the time to talk to relatives at family gatherings or events. Look at family medical records or death certificates if available. All hospitals and most doctors have a release form that you can fill out to request these records. You can always use the Surgeon General’s free online tool called “My Family Health Portrait” at <https://familyhistory.hhs.gov> to create your own pedigree and even bring it with you to your next doctor’s appointment. In sum, knowing your family’s medical history can be important in identifying risks for inherited diseases, and thus the gathering of this information can be beneficial for potential management implications of diseases. Although you cannot change your genes, you can change your lifestyle habits and attitude.

Testing, Testing, Are my Genes On?









The popularity of genetic testing for the average consumer has increased, but before you go out and buy an at-home genetic test for lung cancer, there are a few things you should consider. First, there is more than one gene responsible for lung cancer, and two families with lung cancer may not carry the same gene. That is one reason why we are still studying lung cancer in order to locate all genome variants associated with the disease. Secondly, most doctors advise

against genetic tests for lung cancer, especially if it is what is known as a direct-to-consumer (DTC) test. DTCs are not recognized as a recommended clinical practice. Since lung cancer can be caused by various, yet-to-be-identified genome variants or mutations, no DTC tests can absolutely quantify the specific disease risk unless it is for a known mutation. Anxiety and false reassurance can come from DTC tests without proper guidance from an

informed health care provider. Despite all of the advancements, researchers have only identified a small portion of the entire genetic component thus far. Therefore, with the limited scientific information, DTC test results could be invalid or prove to be useless. There will be a time in the near future where genetic testing is going to be more accurate for lung cancer, like that for breast cancer.

2015 CALENDAR

HEALTH & WELLNESS OBSERVANCES AND EVENTS

JANUARY	FEBRUARY	MARCH
1 A HAPPY NEW YEAR	1-28 National Cancer Prevention Month	8 Daylight Savings Time Begins
1 Global Family Day	1-28 National Wise Health Consumer Month	19 Kick Butts Day
2 LSUHSC is back from the Holidays	4 World Cancer Day, worldcancerday.org	8-14 National Pulmonary Rehabilitation Week
23-24 Rock'n'Roll Health & Fitness Expo, NOLA	17 Mardi Gras Carnival	20  First Day of Spring
16-18 The Louisiana Marathon, Baton Rouge	20 Lung Group, Cancer Services Baton Rouge	21 Breathe Deep Baton Rouge 5K Walk
31 Annual St. Elizabeth Hospital's Family Fest Health Fair, Gonzales	22 World Thinking Day 	28 SW Louisiana Free to Breathe Run/Walk
		28 Lung Force Walk, Mandeville
APRIL	MAY	JUNE
1-30 National Cancer Control Month	1-31 Cancer Research Month	1 National Cancer Survivors Day
1-30 Relay for Life events across Louisiana	1-31 Relay for Life Events across Louisiana	14 American Cancer Society Bark For Life of Amite, LA
5 Easter 	6 World Asthma Day	14 World Blood Donor Day
5-11 Minority Cancer Awareness Week	9 NOLA Veggiefest, nolaveggiefest.com	21 Summer Solstice 
6-12 National Public Health Week	25 Memorial Day	TBD Prevost Memorial Hospital's Annual Health Fair
7 World Health Day	31 World No Tobacco Day	
17-18 NAMI Louisiana State Conference		
JULY	AUGUST	SEPTEMBER
4 Independence Day 	1 World Lung Cancer Day 	1-30 Fruits & Veggies More Matters (.org) Month
23 Relay for Life, DeQuincy	1 National Minority Donor Awareness Day	7 Labor Day
30 Relay for Life, Broussard	9-15 National Health Center Week, www.healthcenterweek.org	11 Lydia Cancer Cajun Food Fest, Lydia
31 Relay for Life, Baton Rouge		15 Take A Loved One to the Doctor Day
		20-28 Active Aging Week, www.lcaa.cc
		23 First Day of Autumn
		26 Family Health & Fitness Day, fitnessday.com
OCTOBER	NOVEMBER	DECEMBER
1-31 Healthy Lung Month	1-30 Lung Cancer Awareness Month	3 International Day of Disabled Persons
1 International Day of Older Persons	1-30 Daylight Savings Time Ends	5 International Volunteer Day
10 World Mental Health Day	5 Shine A Light on Lung Cancer Vigil	6 Hanukkah (Begins at sundown)
19-25 National Respiratory Care Week	17 International Lung Cancer Awareness Day	10 International Human Rights Day
28 National Lung Health Day	19 Great American Smoke-Out & World COPD Day	22 Winter Solstice 
31 Halloween 	26  Thanksgiving	25 Christmas
	27 National Family History Day	31 New Years Eve

The Louisiana Lung Cancer Study Newsletter

The Lung Cancer Study is part of the Genetic Epidemiology of Lung Cancer Consortium, that includes the following members:

- Dartmouth-Hitchcock Norris Cotton Cancer Center
- Karmanos Cancer Center
- Mayo Clinic and Foundation
- Medical College of Wisconsin
- National Human Genome Research Institute, National Institute of Health
- University of Cincinnati
- University of Toledo Medical Center
- **LSU Health Sciences Center—New Orleans**



Our local network of collaborators:

- Abbeville General Hospital
- Abrom Kaplan Memorial Hospital
- Acadia—St. Landry Hospital
- Acadian Medical Center
- Acadian General Hospital
- Bunkie General Hospital
- Dauterive Hospital
- Franklin Foundation Hospital
- Iberia Medical Center
- Lady of the Sea General Hospital
- Lafayette General Medical Center
- LSU Lallie Kemp Regional Medical Center
- Interim LSU Hospital—New Orleans
- Mercy Regional Medical Center
- Opelousas General Hospital
- Our Lady of Lourdes Medical Center
- Pointe Coupe General Hospital
- Prevost Memorial Hospital
- Regional Medical Center of Acadiana
- Reliopath, LLC
- St. Charles Parish Hospital
- St. Helena Parish Hospital
- St. James Parish Hospital
- St. Landry Extended Care
- St. Martin Hospital
- St. Tammany Parish Hospital
- Savoy Medical Center
- Southpark Community Hospital
- Teche Regional Medical Center
- Thibodaux Cancer Care Hospital
- Washington—St. Tammany Medical Center
- Patricia Andrews of the Louisiana Tumor Registry



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