ONCOLOGY REPORT 2017

A Look at **Lung Cancer**:

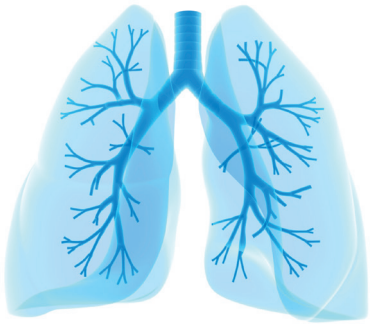
Detection, Survival and Support

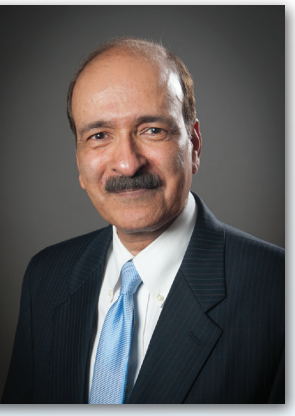
Bon Secours

Our Lady of Bellefonte Hospital

A Revolution in *Cancer Care*

by Kirti Jain, M.D.





Kirti Jain, M.D.
Medical Oncologist-Hematologist

A report from the Cancer Committee Chairman

What a difference a decade makes! The last 10 years have truly been a game changer in oncology. The science of oncology has taken off like a rocket – and the practical applications of that advancement in basic science are keeping up with it. We have learned - and continue to learn more – how a normal cell becomes malignant and how a cancer cell differs from a normal cell at the molecular level. This knowledge has opened up a floodgate of targets on the cancer cell, as well as enabled us to reteach our immune system to recognize and eliminate the rebel cell. These new findings have energized the cancer researchers. The pharmaceutical industry has followed suit too, pouring the lion's share of all research funds into oncology. The results have started to show. An avalanche of new drugs has entered the market and it is just the beginning. The pipeline of potential new treatments is long and exciting.

The next decade promises to be equally exciting – a number of new treatments ranging from targeted therapies to immuno-modulators and from cancer vaccines to genetically engineered therapies are on their way to our arsenal. We are also starting to learn how to combine these new therapies in an optimal way. I believe this is the beginning of taming this ruthless enemy! These are truly exciting and revolutionary times in oncology.

OLBH is at the forefront of this. Not only are we making these advanced therapies available for our patients but along with our on-campus associates Ashland-Bellefonte Cancer Center (ABCC), we are making available tomorrow's treatments today through clinical trials. Already, in about one year's time, three clinical trials that we participate in have turned out to be "positive" with active drugs either already approved or awaiting approval by the FDA – an immunotherapy used in multiple cancers, a supportive therapy to prevent delayed nausea and vomiting due to chemotherapy, and a drug to prevent a dreadful side effect of concurrent use of chemotherapy and radiation to cure head and neck cancer –mucositis.

Realizing the importance of genetics in cancer prevention and treatment, OLBH is the first hospital in the region to add a board-certified advanced genetics nurse specialist to its staff. We have been very active in this field, and look forward to further expanding our service-offerings in genetics.

To stay at the forefront, OLBH designates a common cancer each year to focus on and this year it is lung cancer – a cancer which is a dreadful problem in our region in spite of being highly preventable and curable if caught early. Lung cancer in Kentucky has double the national incidence, advanced-stage presentation in most of our patients—leading to low curability and great suffering. The understanding of biology and treatments of lung cancer have changed radically in the last few years. We have learned early detection with low dose CT scan of lungs in a high risk population can save lives. We have discovered that lung cancer is actually tens of different diseases, and based on that information, have been able to individualize targeted therapies-leading to fewer side effects and longer survival. We have figured out that chemotherapies and immunotherapies can be combined for optimal results. We have found stereotactic body radiation therapy (SBRT) to be equally curative in certain high risk patients who cannot have surgery in early stage lung cancer.

We have also recently learned that addition of adjuvant immunotherapy can help dramatically improve results achieved by concurrent chemo-radiotherapy which has been the standard of care in locally advanced lung cancer. Even in a small cell variety of lung cancer – which has not seen any major improvement in the last three decades, immunotherapy combinations are beginning to show benefit. To take advantage of these discoveries, OLBH has added a lung cancer navigator, established a task force to change algorithms for analyzing lung cancer tissue samples and made cutting-edge therapies available to patients. ABCC has made several clinical trials available involving targeted drugs, immunotherapies and cancer vaccines.

Lung cancer is just one example. OLBH, along with its associates, is committed to remain the leader in cancer therapy in Eastern Kentucky. We continue to emphasize team work to provide leading-edge care, collaborate with the UK Markey Cancer Center Affiliate Network to make advanced therapies like bone marrow transplant available, make available clinical trials in conjunction with our associates like ABCC so that our patients have access to treatments that are not yet approved, validate our quality of cancer care delivery by institutions like the American College of Surgeons Commission on Cancer, and above all – continue to pursue our patient-first approach. For that, we feel indebted to our physicians, nurses, the OLBH Cancer Committee and our staff who devote countless hours to see that every patient is treated like they are the only patient!

Kirti Jain, M.D.
Chairman, Cancer Committee

The Family Curse

Deloris Bostick Knew Cancer Would Be Her Fate

The black cloud of cancer has hung over **Deloris Bostick** her whole life. For her, it was never a matter of if, but when, cancer would come for her. The when was April 2017.

Bostick, 67, had experience with cancer prior to her own diagnosis. "All of my family have had cancer," Bostick said. "My mother had lung and breast cancer and my dad had liver cancer." Bostick watched the disease take both her parents as well as her sister. Bostick's husband is a prostate cancer survivor. The disease never seemed to be far away, and Bostick knows she did herself no favors by some of her own choices. "I'm embarrassed to say but I've been smoking since I was a teen," she said.

With both heredity and lifestyle working against her, Bostick did her best to ignore what she thought was the inevitability of cancer. "I've avoided x-rays because I've always done that, afraid they'd find something," she said. It was her family physician, **Angela Lewis, D.O.**, who suggested Bostick consider a lung cancer screening. Dr. Lewis was encouraged to suggest a low-dose CT lung screening because of Bostick's family history, her smoker's cough, as well as her prior avoidance of screenings. "I don't know why I gave in so easy on the cat scans," Bostick said. She now tells everyone how glad she is that she did.

***Angela Lewis, D.O.**, is Bostick's family physician. It was Dr. Lewis who recommended the lung CT screening that detected Bostick's cancer.*

*Because **Deloris Bostick** caught her cancer early, her post-surgery treatment consists only of her regular follow-ups with her care team.*

Bostick had her low-dose CT lung screening at OLBH in mid-April of 2017. She said she knew what the results would be before she even received them. The results came back as she had feared. "It showed that I had a very small spot on the upper right lobe (of my lung)," Bostick said. Lewis referred Bostick to pulmonologist **Michael Ehrie, M.D.**, who oversaw Bostick's care through the biopsy process and the eventual diagnosis of cancer. The diagnosis was not the surprise, but rather that she had avoided the disease for so long. "I was surprised something didn't show up before it did," Bostick said.

Fortunately, the screening had caught the cancer early…at stage 1a. By the time of her surgery it had progressed to stage 1b. Following a right upper lobectomy in August, Bostick received her oncology care at the Ashland Bellefonte Cancer Center where her oncologist would be **Venu Konala, M.D.**

Bostick said the toughest parts of her cancer battle have been mental more so than physical. "I've had so many different feelings about it," she said. "It's all been like a nightmare. You think so much and you go through so much when something like that happens."

Bostick was fortunate to catch the disease early, and has not required either chemotherapy or radiation. However, when she first received her diagnosis she immediately thought it was a death sentence. "You hear 'cancer' and what's the first thing to come to your mind?," she said. Bostick credits her success at this point in her battle to her faith and the support she has received from family, friends and her congregation at Oak Street Freewill Baptist Church in Flatwoods. She also

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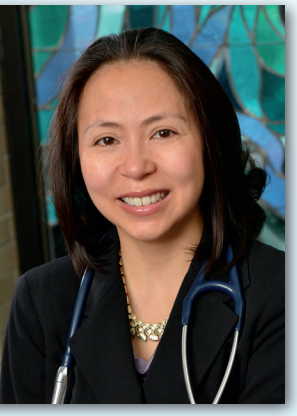
knows her battle very well may depend on her ability to quit smoking. She is taking Chantix, and had quit smoking entirely for the eight weeks following her surgery before the habit took hold of her again. Now she fights her battle with nicotine day by day.

Bostick not only has her family and friends for encouragement, but a medical team that has been a support system as well. "I don't think you could ask for anything better," Bostick said of her care. "Dr. Ehrie is a fabulous doctor. I love him to death. Angela Lewis is a wonderful doctor and you can't beat them over at the (Ashland Bellefonte) Cancer Center." Bostick also has praise for the OLBH staff, particularly **Leigh Ann Holt, RN**, OLBH's lung health nurse navigator. Holt calls periodically to check on Bostick's progress. "That means a lot," Bostick said of the calls. "Leigh Ann will take her time and listen."

Bostick regrets that she feared screenings for so long, and knows she was fortunate that her first lung screening caught her disease in time. Bostick advised anyone who is at risk to have a low-dose screening. "If I had it all to do over again, I would keep up with it," she said of preventative screenings. "It would keep a load off your mind. It's something I always thought about but was afraid to have anything done because of what it would find." In Bostick's case, what it found might have saved her life.

Looking at *Lung Cancer*

by Anna Melissa Murillo, M.D.



Anna Melissa Murillo, M.D.
Medical Oncology-Hematology

Annual statistics from the American Cancer Society show the death rate from cancer in the US has declined steadily during the past two decades. The cancer death rate for men and women combined fell 23 percent from its peak in 1991 to 2012, translating to more than 1.7 million deaths averted during this time period.

The rate of new lung cancer cases has also continued to decline as fewer people smoke. Lung cancer incidence rates began declining in the mid-1980s in men and in the mid-2000s in women. The rate for new cases of lung cancer has declined an average of two percent each year during the previous decade. Death rates have been falling at an average of 2.5 percent annually between 2005 and 2014.

Cancer stage at diagnosis, which refers to the extent of cancer in the body, determines treatment options and has a strong influence on the length of survival. In general, if the cancer is found only in the part of the body where it started it is localized. If it has spread to a different part of the body, the stage is considered regional if the spread is only to nearby areas or distant if it has spread to other areas or a different organ.

The earlier lung cancer is diagnosed, the better chance a person has of surviving five years after being diagnosed. The five year survival for localized lung cancer is 55.6 percent. If the cancer has spread to nearby areas (regional spread), the five year survival rate is 28.9 percent. If the cancer has spread to a different organ or a different area other than the lungs, the five year survival rate is 4.5 percent.

There have been several new medications approved for treatment of lung cancer recently. These medications are called immunotherapy because they help the body's natural immune system to detect and eliminate cancer cells more effectively. These medications are currently being used and the hope is that, with further study, we will understand how best to use these medications, which patients will benefit the most from these medications and how long and in which sequence and combinations to use these medications. Our hope is that this will increase survival for patients with lung cancer.

Lung Cancer *Staging*

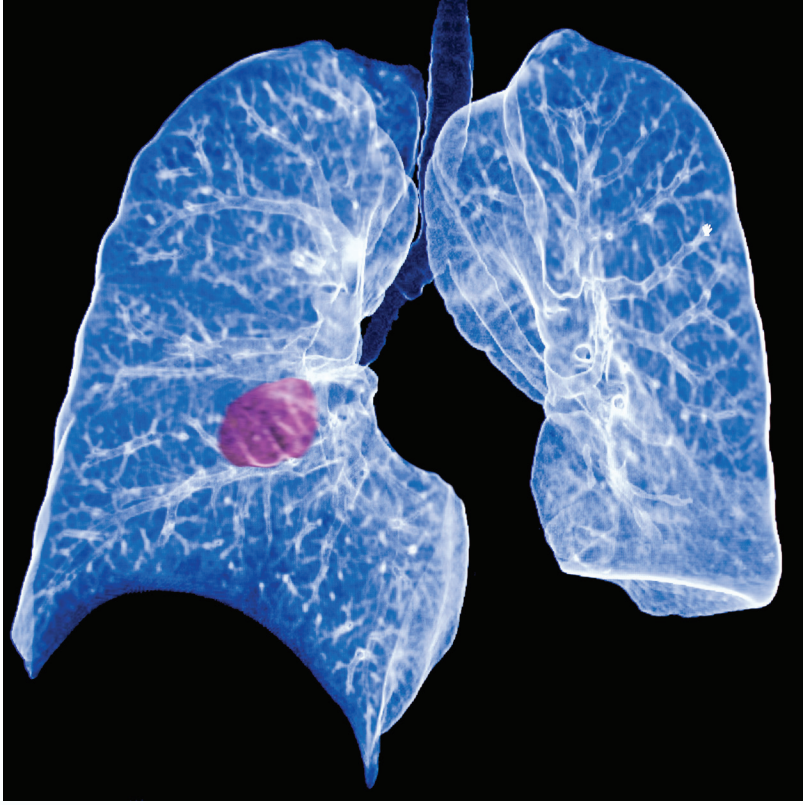
by Terry Justice, M.D.

Terry Justice, M.D.
Radiation Oncologist

After a diagnosis of lung cancer is established, one must determine the clinical extent and stage of disease. The preferred approach uses a thorough history and physical exam, laboratory studies, and radiologic imaging as a road map, with directed biopsies as needed for confirmation. This information forms the basis for clinical decision-making and selection of appropriate treatment options. The initial staging evaluation can be a complex process, and methods may vary depending on resources and local expertise. Multidisciplinary input and timely evaluation are essential. Our general approach is in agreement with guidelines issued by the National Comprehensive Cancer Network (NCCN).

History and physical examination are important in every clinical scenario. Physical signs and symptoms can guide further diagnostic and staging evaluations. Similarly, blood count and serum chemistry abnormalities may also be informative. Unfortunately, tumor-related symptoms and laboratory abnormalities can be associated with advanced stage disease and may portend a poorer prognosis.

Clinical staging of lung cancer patients typically begins with radiographic imaging. Every lung cancer patient should have a CT scan of the chest, including the liver and adrenal glands, preferably using IV contrast. This provides fundamental information regarding tumor size and proximity to critical structures, regional lymph node involvement, pleural/pericardial involvement, and intrathoracic or upper abdominal metastatic spread. PET scans are commonly obtained in patients with clinical stage I-III disease, to further rule out occult metastatic disease and possibly reduce the risk of unnecessary surgery. PET is generally felt to be more accurate than conventional scanning for the evaluation of mediastinal lymph node involvement and extrathoracic metastatic disease. It is important to note, however, there is significant risk of "false positives" and a positive PET result may require histological confirmation. MRI brain scanning is recommended for all patients with newly diagnosed small cell carcinoma. For non-small cell patients, MRI brain scanning is recommended for asymptomatic stage III-IV patients and stage I-II patients with unexplained neurologic symptoms.



The Tumor, Node, Metastasis (TNM) staging system, as published by the American Joint Committee on Cancer (AJCC), is the currently accepted standard staging system for lung cancer. A summary is given on the next page. It categorizes patients into groups based on anatomic extent of disease, which correlate with prognosis and survival. This system allows healthcare providers to effectively communicate and compare cases. The standardization allows for more rigorous evaluation of treatment options and outcomes across a diverse, heterogeneous patient population. The eighth edition of the TNM system (most recent update) will come into use in the United States on January 1, 2018.

References

Thomas KW, Gould MK. Overview of the initial evaluation, diagnosis, and staging of patients with suspected lung cancer. In: UpToDate, Midthun, DE (Ed), UpToDate, Waltham, MA, 2017.

Thomas KW, Gould MK. Tumor, Node, Metastasis (TNM) staging system for lung cancer. In: UpToDate, Jett JR, Lilenbaum RC (Eds), UpToDate, Waltham, MA, 2017.

AJCC (American Joint Committee on Cancer) Cancer Staging Manual, 8th edition, Amin MB, Edge SB, Greene FL et al. (Eds), Springer, Chicago 2017.

T, N, and M descriptors for the eighth edition of TNM classification for lung cancer

T: Primary tumor			
Tx	Primary tumor cannot be assessed or tumor proven by presence of malignant cells in sputum or bronchial washings but not visualized by imaging or bronchoscopy		
T0	No evidence of primary tumor		
Tis	Carcinoma in situ		
T1	Tumor ≤3 cm in greatest dimension surrounded by lung or visceral pleura without bronchoscopic evidence of invasion more proximal than the lobar bronchus (ie, not in the main bronchus)*		
T1a(mi)	**Minimally invasive adenocarcinoma**¶		
T1a	**Tumor ≤1 cm in greatest dimension***		
T1b	**Tumor >1 cm but ≤2 cm in greatest dimension***		
T1c	**Tumor >2 cm but ≤3 cm in greatest dimension***		
T2	Tumor >3 cm **but ≤5 cm** or tumor with any of the following features:Δ ▪ **Involves main bronchus regardless of distance from the carina but without involvement of the carina** ▪ Invades visceral pleura ▪ **Associated with atelectasis or obstructive pneumonitis that extends to the hilar region, involving part or all of the lung**		
T2a	**Tumor >3 cm but ≤4 cm in greatest dimension**		
T2b	**Tumor >4 cm but ≤5 cm in greatest dimension**		
T3	**Tumor >5 cm but ≤7 cm in greatest dimension** or associated with separate tumor nodule(s) in the same lobe as the primary tumor or directly invades any of the following structures: chest wall (including the parietal pleura and superior sulcus tumors), phrenic nerve, parietal pericardium		
T4	**Tumor >7 cm in greatest dimension** or associated with separate tumor nodule(s) in a different ipsilateral lobe than that of the primary tumor or invades any of the following structures: **diaphragm**, mediastinum, heart, great vessels, trachea, recurrent laryngeal nerve, esophagus, vertebral body, and carina		
N: Regional lymph node involvement			
Nx	Regional lymph nodes cannot be assessed		
N0	No regional lymph node metastasis		
N1	Metastasis in ipsilateral peribronchial and/or ipsilateral hilar lymph nodes and intrapulmonary nodes, including involvement by direct extension		
N2	Metastasis in ipsilateral mediastinal and/or subcarinal lymph node(s)		
N3	Metastasis in contralateral mediastinal, contralateral hilar, ipsilateral or contralateral scalene, or supraclavicular lymph node(s)		
M: Distant metastasis			
M0	No distant metastasis		
M1	Distant metastasis present		
M1a	Separate tumor nodule(s) in a contralateral lobe; tumor with pleural or pericardial nodule(s) or malignant pleural or pericardial effusion◦		
M1b	**Single extrathoracic metastasis**§		
M1c	**Multiple extrathoracic metastases in one or more organs**		
Stage groupings			
Occult carcinoma	TX	N0	M0
Stage 0	Tis	N0	M0
Stage IA1	**T1a(mi)**	**N0**	**M0**
	T1a	**N0**	**M0**
Stage IA2	**T1b**	**N0**	**M0**
Stage IA3	**T1c**	**N0**	**M0**
Stage IB	T2a	N0	M0
Stage IIA	T2b	N0	M0
Stage IIB	**T1a to c**	**N1**	**M0**
	T2a	**N1**	**M0**
	T2b	N1	M0
	T3	N0	M0
Stage IIIA	**T1a to c**	**N2**	**M0**
	T2a to b	N2	M0
	T3	N1	M0
	T4	N0	M0
	T4	N1	M0
Stage IIIB	**T1a to c**	**N3**	**M0**
	T2a to b	N3	M0
	T3	**N2**	**M0**
	T4	N2	M0
Stage IIIC	**T3**	**N3**	**M0**
	T4	**N3**	**M0**
Stage IVA	**Any T**	**Any N**	**M1a**
	Any T	**Any N**	**M1b**
Stage IVB	**Any T**	**Any N**	**M1c**

NOTE: Changes to the seventh edition are in bold.

TNM: tumor, node, metastasis; Tis: carcinoma in situ; T1a(mi): minimally invasive adenocarcinoma.
* The uncommon superficial spreading tumor of any size with its invasive component limited to the bronchial wall, which may extend proximal to the main bronchus, is also classified as T1a.
¶ Solitary adenocarcinoma, ≤3 cm with a predominately lepidic pattern and ≤5 mm invasion in any one focus.
Δ T2 tumors with these features are classified as T2a if ≤4 cm in greatest dimension or if size cannot be determined, and T2b if >4 cm but ≤5 cm in greatest dimension.
◦ Most pleural (pericardial) effusions with lung cancer are due to tumor. In a few patients, however, multiple microscopic examinations of pleural (pericardial) fluid are negative for tumor and the fluid is nonbloody and not an exudate. When these elements and clinical judgment dictate that the effusion is not related to the tumor, the effusion should be excluded as a staging descriptor.
§ This includes involvement of a single distant (nonregional) lymph node.

Advances in Lung Cancer: *Immunotherapy*

by Anshu Kumar Jain, M.D.

Anshu Kumar Jain, M.D.
Radiation Oncologist

Lung cancer has remained the most common cause of cancer mortality in both men and women for several years for a variety of factors. First, it is one of the most common cancers attributable to a preventable cause: smoking. Secondly, we often diagnose lung cancers in advanced stages, when it has already spread from the lungs to lymph nodes or other places within the body, making it more difficult to treat and thus contributing to mortality. And lastly, the treatments we have historically used have provided some control, and occasional cures, but for the most part have not moved the needle in reducing lung cancer deaths. However, recent advances in therapy for lung cancer, especially for more advanced stages of disease, have given patients and providers alike tremendous hope that we may start to win the battle against this disease. Our hope stems from a new type of therapy for lung cancer (as well as other types of cancer) called immunotherapy.

Our immune systems have been carefully honed to recognize infectious organisms and pathogens such as bacteria and viruses that don't belong in our body. When we have infections, the immune system gets to work carefully recognizing the invaders and eradicating them, which is why we are able to overcome illnesses like the common cold, the flu, bacterial infections, etc. One would think that our immune system could help fight cancer. In fact, it does all the time. As our bodies age, many of our normal cells undergo changes that could develop into cancers. However, our immune system is constantly watching and often recognizes and destroys such cells before they have an opportunity to turn into a cancer. The type of immune cells that usually attack cancer cells are called cytotoxic T-cells. Unfortunately, cancer is smart. Certain cancers have figured out a way to shut off immune signals so that the immune system, and specifically, the cytotoxic T-cells cannot destroy the cancerous cells.

Imagine that cytotoxic T-cells have a lock which can turn them on and off. In essence, these cancer cells have a key which they use to turn the immune T-cells off. Despite our knowledge that cancer cells can shut off the immune system, we as physicians have never been able to do anything about it because we did not understand how cancer cells managed to do this. That is, until now. Research conducted during the past several years has shed light on just how the key and lock work. Specifically, the immune cells like cytotoxic T-cells have receptors (the lock) such as CTLA-4 and PD-1. When these receptors are triggered by certain ligands such as PD-L1 (the key) on the surface of cancer cells, the cytotoxic T-cells essentially shut down and can't perform their essential function of destroying the cancer cells.

That leads us to the most significant breakthrough in cancer therapy in the last decade: the development of cancer immunotherapy. We now have specific biologically engineered drugs which block the ability of the cancer cell ligand (the key) to turn off the immune system. This lets the immune system and its cytotoxic T-cells remain active and ultimately attack and destroy the cancer cells. This is a radically different approach than traditional therapies such as chemotherapy which often are not selective in which types of cells they kill, thus harming both cancerous tissues and normal tissues. The immunotherapies in use today for lung cancer and other cancers include drugs such as nivolumab, pembrolizumab, atezolizumab, durvalumab, and avelumab which block the interaction between the PD-L1 and PD-1 key and lock. These drugs are enabling our own bodies to fight cancer, and have been so effective that they are now given in addition to or actively replacing chemotherapy as the first option for treatment of advanced stage non-small cell lung cancer.

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> *"Adding immunotherapy more than doubled the time it took on average for patients' cancers to progress. That means that patients are staying in remission nearly twice as long!"*
>
> – Anshu Kumar Jain, M.D.

Consider the case of Stage III non-small cell lung cancers. We often use a combination of radiation and chemotherapy which is able to control the disease for some time and prolong life. However, patients' cancers commonly get worse. The chart that accompanies this article shows the enormous potential for immunotherapy to transform outcomes in lung cancer treatment. The figure displays two curves which represent two distinct groups of patients and the time it takes for their cancers to progress. One group received chemotherapy and radiation and no further treatment (the yellow line) while the second group (the blue line) received chemotherapy with radiation and then received darvulumab, a type of immunotherapy. As you can see, adding immunotherapy more than doubled the time it took on average for patients' cancers to progress. That means that patients are staying in remission nearly twice as long!

Indeed, at OLBH and the Ashland Bellefonte Cancer Center (ABCC), we are seeing the enormous impact that such therapies are having on our patients, enabling them to live longer, and often cancer free. Our doctors are working closely together and actively investigating new approaches by bringing to our community the latest clinical trials and treatments combining immunotherapy with therapies such as radiation and chemotherapy to further improve outcomes. Through improved therapies and treatment, earlier diagnosis through lung cancer screening, and education on preventable causes of lung cancer (smoking cessation), we at OLBH and ABCC are taking big steps forward towards reaching a cure.

Figure 1

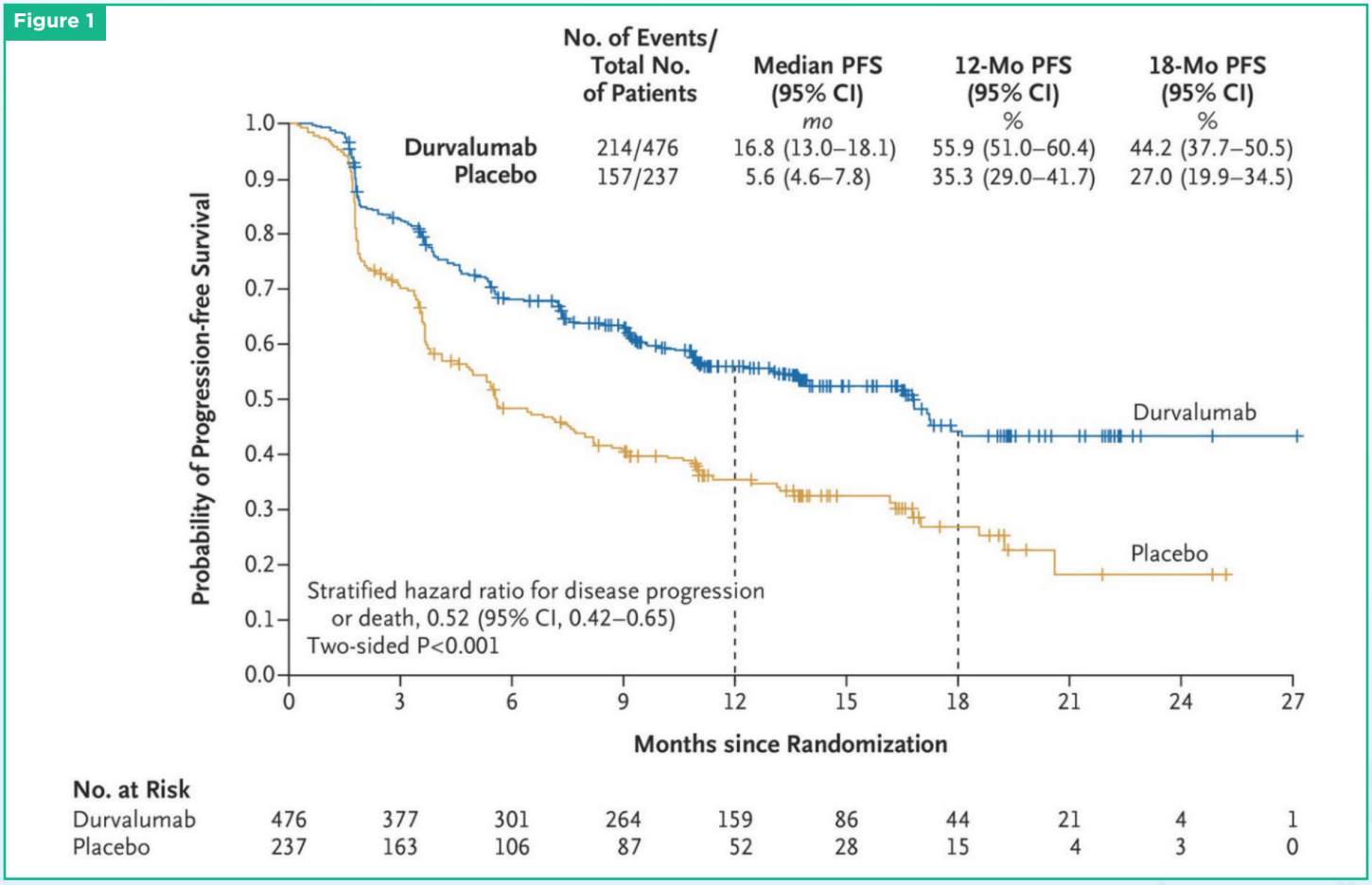

Figure 1. Results of a randomized clinical trial demonstrating the impact on progression free-survival on Stage III NSCLC patients receiving immunotherapy (blue line) compared to placebo (yellow line) after concurrent chemoradiation. The lines demonstrate the significant positive impact of adding immunotherapy on remission rates. (Antonia SJ et al. N Engl J Med 2017;377:1919-1929).

Partnership: OLBH a Member of Markey Cancer Center Affiliate Network

"Unity is *strength*… when there is teamwork and collaboration wonderful things can be achieved."
- Mattie Stepanek

Bon Secours Kentucky Health System's Cancer Care at Bellefonte program is a member of the University of Kentucky Markey Cancer Center Affiliate Network (MCCAN). The MCCAN is a group of community hospitals in the Commonwealth of Kentucky that provide high-quality cancer services and programs in their communities with the support of the University of Kentucky's Markey Cancer Center.

The MCCAN extends the Markey Cancer Center's reach so patients across the Commonwealth can receive the same high-quality cancer care close to their homes, including patients of OLBH. The affiliation gives cancer patients in the Tri-State area access to additional specialty and subspecialty physicians and care, including clinical trials and advanced technology, while allowing them to visit OLBH for most treatment. OLBH is one of 20 hospitals in the MCCAN.

For more information about the MCCAN, visit ukhealthcare.uky.edu/markey-cancer-center/refer-patient/affiliate-network.

UK HealthCare
MARKEY CANCER CENTER
Network

LUNG CANCER MEDICAL TEAM


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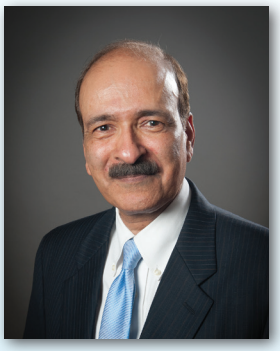
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Jeffery Lopez, M.D.


Sabrina Roberts, M.D.

Not Pictured:
Mahmoud Moammar, M.D.
Mary Ann Stevens

Limb Alert Bracelets at OLBH are a **Lymphedema Preventive Measure**

by Christi McKinney, MSN, CIC, OCN

Christi McKinney, MSN, CIC, OCN

Background:

Lymphedema of the arm is the chronic swelling or feeling of tightness around the arm or hand caused by the accumulation of lymphatic fluid in spaces between arm tissue. During axillary node dissection, the normal drainage of lymph from the arm is disrupted, increasing the chance for fluid build-up. It is estimated that 10 to 20 percent of breast cancer patients who undergo axillary node dissection develop lymphedema. Lymphedema is a progressive condition without a cure. Steps should be taken to help reduce the risk of developing lymphedema; thereby, promoting quality patient care.

According to the National Lymphedema Network, treatments to the affected arm that could trigger or worsen lymphedema of the arm may include blood pressures (blood pressure cuffs used improperly or with extreme pressure), injections, blood draws, and other medical tests. Best practice is for the patient to have a bracelet which can be worn at all times alerting healthcare workers not to use a specific limb.

Previously, only throw-away limb alert bracelets were provided to breast cancer patients who had node dissection on admission to the hospital. Therefore, the limb alert bracelets were removed upon discharge.

Action and Process Implementation:

The following interventions were implemented at OLBH in July 2017:

- Limb alert bracelets which could be worn daily were purchased with grant funding
- Limb alert bracelets are distributed to OLBH's breast cancer patients by the breast navigator, local oncologists, outpatient chemotherapy infusion center, women's boutique, and radiology staff
- Lymphedema and lymphedema prevention patient education continue to be utilized
- All breast cancer patients are seen by a certified lymphedema therapist the day of surgery or shortly after.

Quality Results:

By utilizing the limb alert bracelet, breast cancer survivors at risk for developing lymphedema can increase their chance of remaining lymphedema-free or keep their existing lymphedema under control by wearing a limb alert bracelet at all times. By the end of November, 85 limb alert bracelets had been distributed to OLBH patients.

The above information meets ACOS Quality Improvement Standard 4.8.

Support Services For Cancer Patients & Families

SUPPORT GROUPS

Breast Cancer Support Group: Each month at OLBH's Breast Cancer Support Group a new topic is presented to those whose lives have been affected by a diagnosis of breast cancer.

Look Good. Feel Better: This support group helps women cope with the appearance-related side effects of cancer treatment by teaching tips that enhance appearance and strengthens self-image. Additionally, Look Good. Feel Better features experts trained to help patients deal with the physical side effects of cancer treatment and to promote good hygiene. The support group is offered bimonthly in conjunction with the American Cancer Society, the Personal Care Products Council Foundation and the National Cosmetology Association.

Man to Man: Man to Man offers monthly support meetings for those whose lives have been affected by a diagnosis of prostate cancer.

Smoking Cessation: OLBH offers a free, eight-week smoking cessation support group that utlizes Freshstart, the American Cancer Society's quit smoking program.

To learn more concerning OLBH's free cancer-related support groups, call the OLBH ***CareLine*** at **(606) 833-CARE (2273)**.

CANCER REHABILITATION

OLBH's Cancer Rehabilitation is a comprehensive multidisciplinary program designed to offer outpatient rehabilitation services to patients and survivors. Customized programs are created to address rehabilitation needs for a variety of conditions including, but not limited to:

- Fatigue
- Numbness in feet/hands
- Weakness
- Scar tissue formation
- Poor endurance
- Lymphedema
- Decline in balance
- Difficulty swallowing
- Postural changes
- Cognitive/communication problems
- Pain
- Energy conservation
- Difficulty walking

Those experiencing problems that were not present prior to a cancer diagnosis, especially those that affect daily function and quality of life, might be candidates for cancer rehabilitation. For more information concerning OLBH's Cancer Rehabilitation program, call the Human Motion Vitality Center at **(606) 833-3517**.

2017 Cancer Data Summary

Percentage of OLBH Cancer Incidence by Primary Site

OROPHARYNX	2%	CERVIX	1%
ESOPHAGUS	1%	ENDOMETRIUM (CORPUS UTERI)	3.6%
STOMACH	2%	OTHER FEMALE GENITAL ORGANS	1%
SMALL INTESTINE	1%	PROSTATE	8.3%
COLON	13%	TESTIS	1%
RECTUM/ANUS	6%	BLADDER	3.6%
LIVER	1%	KIDNEY	2%
PANCREAS	3.6%	THYROID	2%
LARYNX	2%	HODGKIN'S	1%
TRACHEA, BRONCHUS, LUNG-SMALL	3.6%	NON-HODGKIN'S LYMPHOMAS	4%
TRACHEA, BRONCHUS, LUNG-NSC	12%	PLASMA CELL TUMORS	2%
CONNECTIVE & SOFT TISSUE	1%	MYELOID LEUKEMIAS	1%
MALIGNANT MELANOMA	2.4%	MYELOPROLIF. & MYELODYSPLAS.	1%
BREAST, FEMALE & MALE	24.4%	UNKNOWN PRIMARY	1%

Cancer Registrar's Report

OLBH began its cancer registry in 1991 to collect data from every patient diagnosed or treated for cancer at the hospital. The data plays an important role in the ongoing evaluation of cancer care. The cancer registry is a computerized data collection and analysis center that contributes to patient treatment, planning, staging, and continuity of care through data retrieval, annual analysis, and long term follow-up.

The OLBH cancer registry is a member of Kentucky Cancer Registry (KCR) and the American College of Surgeons (ACOS). Information is submitted annually to Kentucky Cancer Registry and the National Cancer Data Base, which is designed to provide an annual review of patient care, a comparative summary of hospital cancer statistics and data edit report.

All information collected for the registry is kept strictly confidential. General data however, is available for presentations, publications, reports, etc. For more information regarding the OLBH cancer registry, please call **Barb Fitzpatrick, CTR,** at **(606) 833-3252**.

2017 **Cancer Committee**

Dr. Kirti Jain
Chairman, Medical Oncologist-Hematologist

Dr. Phillip Lackey
Surgeon, Cancer Liaison

Dr. Brian Defade
Urologist, Co-Cancer Liaison

Dan Spreacker
Pastoral Care

Rose Guy-Sibley
Pastoral Care

April Broun, SWK

Susan Coburn-Somon, SWK

Christy Coovert, BSN, RN, OCN

Dr. John Darnell, VP, CMO

Brandi Fields, MSN, RN, NE-BC
VP Patient Care Services

Barb Fitzpatrick, CTR

Anna Hampton, BSN, RN
Quality Improvement

Terri Hannon, RT
Director of Radiology Service

Leigh Ann Holt, RN
Nurse Navigator

Kim Jones, BSN, RN
Palliative Care

Dr. Anshu Jain
Radiation Oncologist

Dr. Terry Justice
Radiation Oncologist

Dr. Venu Konala
Medical Oncologist-Hematologist

Gerry Lyons, Pharm-D

American Cancer Society

Ginger McClurg, RN

Shelly McComas, Pharm-D
Director of Pharmacy

Christi McKinney, MSN, CIC, OCN
Infection Prevention & Control/ Oncology Service Line

Dr. Anna Melissa Murillo
Medical Oncologist-Hematologist

Dr. Gabriel Rodriguez
Pathology

Amber Schweickart, OTR

Rebecca Simpson, MSW
Kentucky Cancer Program

Mary Ann Stephens, APRN
Ashland Bellefonte Cancer Center

Pamela Stevens, BSN, RN
Manager 2 Center

Margaret Ward, APRN
Women's Center Breast Nurse Navigator

Dr. Baoying Weng
Pathology

Diana Williams, MSN, RN
Director of Bellefonte Home Health Care Agency

ONS Oncology Nursing Society

Commission on Cancer

ACR American College of Radiology Breast Imaging Center of Excellence

HealthCare MARKEY CANCER CENTER Network

OLBH is affiliated with UK Markey Cancer Center. The UK Markey Cancer Center Affiliate Network enhances access to cancer services and programs through collaboration with community hospitals.