The good news is that we are slowly wearing our foe down, and each year we add more and more to our legion of cancer survivors.

Alan M. Miller, MD, PhD

Welcome to the Fight Club

The theme of this year’s Annual Report is “Fighters Wanted.” Unlike a fight club where the combatants fight each other, in this fight club we all fight a common opponent, cancer. The good news is that we are slowly wearing our foe down, and each year we add more and more to our legion of cancer survivors.

In the past year we have brought an array of new weapons to the fight. The advent of immunotherapy is changing the way we approach cancer treatment. The Baylor Charles A. Sammons Cancer Center is leading the way with clinical trials in immunotherapy. This past year has seen initiation of our first CAR-T trials which take the patient’s own immune cells, modify them in the lab and then reinfuse them to attack the cancer. We have also conducted exciting trials of vaccines developed in our own labs to fight breast cancer and pancreatic cancer. This research is conducted through our Research and Treatment Centers and with exciting collaborations like the one with TGEN, and support from grateful patients and wonderful organizations like Swim Across America.

Providing for the needs of our survivors becomes a new imperative for all of us who are participants in the fight game. In September we held our first annual Survivorship Summit. Inspired by our keynote speaker, Diane Hedtitsian, we brought together a broad group of survivors, providers, care givers and supporters to strategize on how to best serve this population.

We identified five dimensions that define a survivorship program: Fitness and Rehabilitation, Body and Soul, What About My Family?, Cognition, and Transitions to Primary Care. Each of these dimensions are already active but the plan is to grow them and integrate them into a single program focused on the survivor. In the coming year we will see continued development of these efforts and provide what is needed, after the treatment ends.

So my final message is, Fight Onward, Survive, Thrive and Exchange Cancer Care for LIFE.

Alan M. Miller, MD, PhD
Chief of Oncology, Baylor Scott & White Health – North Texas
Medical Director, Baylor Charles A. Sammons Cancer Center at Dallas

*As of March 1, 2017, Dr. Alan Miller is no longer with Baylor Scott & White Health. Dr. Carlos Becerra is serving as interim chief of oncology for Baylor Scott & White – North Texas.

From the Medical Director

Alan M. Miller, MD, PhD

The good news is that we are slowly wearing our foe down, and each year we add more and more to our legion of cancer survivors.

Alan M. Miller, MD, PhD

Chief of Oncology, Baylor Scott & White Health – North Texas
Medical Director, Baylor Charles A. Sammons Cancer Center at Dallas
**Service**

Our outpatient social worker saw 468 patients/families in our office for concerns involving coping with their diagnosis, psychosocial evaluations, financial issues, housing, transportation, home health and hospice needs, distress screen interventions, and educational questions.

Our trained Cancer Survivor Network Volunteers made 386 patient visits in the hospital to newly diagnosed patients for support.

Our two full time and one part-time music practitioners played therapeutic music at the bedside for 4446 patient visits.

Our FitSteps® exercise program had 4983 patient visits (M-Th). They have added group classes to offer more options.

Our clinical psychologist, available by physician referral for help with adjustment to illness issues, has seen 573 patients from January to December 2016.

Our part-time Leukemia & Lymphoma Society Patient Advocate has assisted 425 patients & families.

**Programs**

The Cvetko Center offered a total of 428 programs in FY 2016, with 4318 participants attending. This included 14 cancer-specific support groups: Amyloid, Bladder-Kidney, Breast, Caregiver, General Cancer, GVHD, Lung, Myeloma, Neuro-Endocrine, Ovarian, Prostate, Oral Head and Neck, Survivors, and Waldenstrom’s.

A total of 561 participants attended our weekly chemo classes.

Our very popular Healthy Cooking Demonstration classes drew in 240 participants. Annually, we offer a diverse variety of educational classes and programs including our Barrett Lectureship; Prostate, Ovarian and Breast cancer survivor luncheons; Young Adult Cancer Survivor conference; Complementary Therapies workshop; Cancer Survivor’s Week celebration in June; Nutrition classes; Relaxation and Journaling classes and Look-Good-Feel-Better® classes, to name a few.

Our Deborah Rodriguez Patient Resource Library has nearly 900 books on topics such as coping, disease specifics, healthy cooking, in addition to Bibles, and even novels for patients to check out. Additionally, there are numerous brochures from the American Cancer Society, Leukemia & Lymphoma Society, NCI, etc., available. We have three computers and a printer for patients and families to use for research, with suggested websites.

Our Integrative Medicine clinic is held on Tuesdays and Thursdays and had 438 patients in clinic for consults, nutrition and acupuncture.

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**Spotlight on Virginia R. Cvetko Center**

**Patient Education and Support Center**

**Fiscal Year 2016 Recap**

<table>
<thead>
<tr>
<th>SCREENING TYPE</th>
<th>NUMBER OF 2016 SCREENINGS</th>
<th>NUMBER AT RISK</th>
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<tr>
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<tr>
<td>Low Dose CT Lung</td>
<td>144</td>
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<td>1</td>
</tr>
</tbody>
</table>

**Cancer Screenings**

* Baylor Sammons Cancer Center at Dallas 2016

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**FIGHTERS WANTED:** 2016 ANNUAL REPORT | BAYLOR UNIVERSITY MEDICAL CENTER AT DALLAS

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**FIGHTERS WANTED:** 2016 ANNUAL REPORT | BAYLOR UNIVERSITY MEDICAL CENTER AT DALLAS
Phanithropy

As Baylor Scott & White Health – North Texas presses on in the fight against cancer, donor support is critical in our ability to make significant progress in maintaining and advancing our reputation as one of the top oncology programs in the country.

Since inception, Baylor Health Care System Foundation raised more than $10 million in support of our North Texas cancer initiatives. These funds have gone to support patient-centered programs; to develop innovative research to assist us in the diagnosis and treatment of cancer for current, and future generations; to purchase innovative technology and capital equipment that advance therapies and nurture healing; to train dedicated cancer specialists through graduate and undergraduate medical education programs.

Thanks to the generosity of philanthropic leaders in our community, we are moving mountains for our patients who entrust us with their lives, their families, and the communities we serve. Together, we are improving lives in Dallas – and beyond – in tangible, lasting ways.

Thanks to the generosity of philanthropic leaders in our community, we are moving mountains for our patients who entrust us with their lives, their families, and the communities we serve. Together, we are improving lives in Dallas – and beyond – in tangible, lasting ways.

Steens, Horner Families Support Home-Away-From-Home for Cancer Patients

The American Cancer Society selected Baylor University Medical Center at Dallas as the location of its newest Hope Lodge, a home-like facility that offers free accommodations for cancer patients who have to travel long distances for their care.

“It’s bad enough to have to go through cancer. If they have to worry about finding a place to stay, parking at a hospital or getting meals — it can be a real struggle.”

When Trudy learned of the plans for Hope Lodge Dallas, she decided that contributing to it would be a way to honor Don, who founded United Surgical Partners International Inc. (USPI), a short-stay surgical facility company. “I think Hope Lodge will be a wonderful space where cancer patients can feel comfortable and concentrate on getting better,” Trudy said.

Several of Don’s friends are supporting the effort, through the Friends of Don Steen Campaign. Among them are Bill Wilcox, CEO of USPI, and Ken Newman, a close personal friend of Don’s.

These two gifts — $5 million from the Don and Trudy Steen Charitable Foundation and $1.25 million from the Horner Family — are instrumental to Hope Lodge Dallas, and will be 100 percent supported by philanthropy.

For both of the families, the gifts are personal and represent a tangible part of a long history of giving to Baylor.

Don Steen, who died of a form of leukemia in 2014, was a longtime supporter of the Baylor College of Medicine. During his illness, he and his wife, Trudy, noticed many cancer patients who struggled with taking care of their families while commuting long distances to receive medical care. “People sometimes have to give up their jobs, or leave their children behind with grandparents while they’re going through treatment,” Trudy said. “It’s bad enough to have to go through cancer. If they have to worry about finding a place to stay, parking at a hospital or getting meals — it can be a real struggle.”

The Horner Family have been loyal supporters of Baylor, and their gifts have provided significant support for Baylor’s fight against cancer and have also allowed the Horner Family Garden of Hope to be featured in the butterfly garden. The Horner Family Chapel in the Baylor Charles A. Sammons Cancer Center.

I think Hope Lodge will be a wonderful space where cancer patients can feel comfortable and concentrate on getting better.

Trudy Steen
Don and Trudy Steen Charitable Foundation
2016 Celebrating Women Luncheon Raised $1.8 Million for Baylor’s Fight Against Breast Cancer

On October 20, Baylor Health Care System Foundation celebrated the 17th annual Celebrating Women luncheon. The 2016 luncheon, presented by Tom Thumb for the 12th consecutive year, raised $1.8 million to benefit Baylor Scott & White Health’s fight against breast cancer in North Texas.

Since the first Celebrating Women luncheon in 2000, more than $28 million has been raised to support breast cancer initiatives at Baylor Scott & White Health – North Texas. Donations to Celebrating Women have supported advanced diagnostic equipment, innovative clinical research, and most importantly, safe, quality, compassionate care for North Texas patients and families.

“Thanks to generous support we’ve received over the past 16 years, we are not just cheering on breast cancer patients from the sidelines. We are actively fighting alongside them,” said Rowland K. “Robin” Robinson, Foundation president.

“Every donation in support of Celebrating Women has had a positive ripple effect on breast cancer treatment and care for our patients and their families. It’s truly inspiring to see our community come together year after year with such tremendous enthusiasm for this cause – one that touches us all.”

Breast cancer survivor and multi-talented actress, producer, writer and singer, Rita Wilson, was the featured speaker. In March 2015, Rita was diagnosed with breast cancer, and since then has shared her inspiring story with the world. During a Q&A session, in which she was interviewed by Robin, she discussed her family, career highlights, and her breast cancer diagnosis and journey.

For those in the audience just starting their journey with the disease, Wilson advised, “Trust your instincts and your gut. Don’t be afraid to ask for a second opinion, for your doctor or for your pathology. For those going through treatment or are about to go through treatment, I know it feels like it’s never going to be anything other than what you’re doing, and what that life is, but there is a light at the end of the tunnel. You’re going to be able to see that light sooner than you think.”

Olympians and Cancer Survivors Team Up to Fight Cancer, Make Waves at Swim Across America – Dallas

In 2017, nearly 1,700,000 cases of cancer will be diagnosed in the US. This staggering statistic offers compelling proof of the need to continue devising new approaches to research and treatment.

Brought to North Texas in 2011 by Olympian swimmers, Swim Across America – Dallas provides a rare opportunity for cancer survivors, former members of the U.S. Olympic Swim Team and hundreds of swimmers of all skill levels to make an impact on cancer research locally. The sixth annual swim raised $210,000 for the Swim Across America Innovative Clinical Trials Center (ICTC) at the Baylor Charles A. Sammons Cancer Center at Dallas.

“We’re always thrilled to work with Swim Across America and are so grateful for their commitment to raise funds desperately needed for cancer research,” said Dr. Alan Miller, chief of oncology, Baylor Scott & White Health – North Texas Division and medical director, Baylor Charles A. Sammons Cancer Center at Dallas, which is the largest outpatient cancer center in North Texas dedicated to cancer care, research and education. Dr. Miller is also a swimmer in the event. “These event funds go directly to the Swim Across America Innovative Clinical Trials Center, where researchers are working continuously to find a cure for a broad range of cancers."

Since the first event in 2011, SAA—Dallas has contributed more than $2 million to Baylor Health Care System Foundation to fund advanced cancer research at the ICTC. Through these trials, we truly are changing lives as many more patients are given hope for a cure.”
Many of these new promising therapies rely on dendritic cells, an important component of the human immune system that orchestrates our body’s defense against illness. In the past 20 years, the study of dendritic cells has exploded, and vaccines using dendritic cells are thought to be viable treatments for many diseases, from HIV to cancer. Scientists around the world now dedicate their lives to the study of dendritic cell vaccines, including Botond Igyarto, Ph.D., lead scientist at the Celebrating Women Breast Cancer Research Lab.

Since dendritic cells are master coordinators of all immune responses, Dr. Igyarto’s work focuses on developing injectable breast cancer vaccines that target these cells.

“At this point, we are transitioning from preclinical work to clinical studies. We hope to show that we can treat patients with breast cancer using our vaccine,” said Dr. Igyarto.

This dendritic cell-targeting is designed to achieve superior cancer-fighting results.”

Since dendritic cells are master coordinators of all immune responses, Dr. Igyarto’s work focuses on developing injectable breast cancer vaccines that target these cells.

This dendritic cell-targeting is designed to activate the patient’s immune system against the cancer via injection of a vaccine. The therapeutic vaccine consists of cancer-derived molecules fused to a carrier that is specific to a certain receptor expressed by the dendritic cells. When injected, these reagents are taken up by the dendritic cells, which then activate other immune cells, such as T cells, to find and kill tumor cells.

This type of “off-the-shelf” therapy would be delivered through standard vaccination routes such as intradermal/intramuscular injections. Vaccines made at Baylor Institute for Immunology Research (BIR) that target dendritic cells could also potentially be used for other types of cancers and infectious diseases.

One day, Dr. Igyarto is currently in the preclinical phase of manufacturing and testing.

“arre excited by the promising preliminary data,” said Dr. Igyarto. “If this initial round of testing proves our concept, plans are to apply for a National Institutes of Health grant and move into preclinical trials in late 2017.”

Previous research supported by the Amy T. Selvick Fund for Breast Cancer Immunotherapy at Baylor Scott & White Health is committed to exploring multiple ways of achieving the best immune responses in those fighting breast cancer by performing innovative research and developing new treatments. Financial support is continuously needed for the lab to investigate more ways to treat breast cancer and to implement clinical trials.

For more information on how you can help support Dr. Igyarto’s work at Baylor Scott & White Health – North Texas, contact the Foundation at 214.820.3158 or visit Give.BaylorHealth.com.
The Arts in Medicine program offered through the Baylor Health Care System Foundation and the T. Boone Pickens Cancer Center and the Cvetko Patient Resource Center at Baylor Dallas underwrites a variety of therapeutic arts activities and events including:

- Art therapy
- Art-in-residence
- Art studio
- Art carts
- Music therapy
- Music practitioners
- Read-aloud program
- Performance series
- Exhibitions and shows
- Art curator and Art Advisory Council
- Evening with the Artist series.

Barrett, coordinator of the Arts in Medicine program, has been a musician since early childhood. A jack-of-all-trades, Barrett retired from the Marine Corps after 30 years of service, and treatment with the gamma knife, today she undergoes two radiation treatments each day at the art studio. An art therapist showed me how to use a paintbrush before, but the minute I walked into the studio, I discovered a creative side of myself. The whole thing has changed and I’m going to have an exhibition of my art at the hospital. The show will include a variety of paintings, each with a story about my journey, what I was thinking when I drew the painting, how I was feeling at the time. Some paintings are dedicated to the people that have meant so much to me – my doctors, my husband, the art staff and others. I have in the art studio – guitars, harps and our music therapist with her mobile wagon of instruments for patient and staff interaction. I feel blessed to work with so many talented people.”

Research conducted by Americans for the Arts demonstrates that creative arts in health care interventions can contribute to the following positive outcomes when services are integrated into medical treatment and community prevention and wellness programs:

- Reduced lengths of hospital stays
- Decreased need for multiple medical visits
- Reduced reports of pain and anxiety related to illness and invasive treatment
- Increased self-esteem and reductions in stress
- Reduced reports of depression and improvements in quality of life
- Decreased use of medical interventions covered by Medicare among the aging.

Emily Sawyer, MSN, RN, Colorectal Outcomes Manager, “We have a monthly Mandala that our patients contribute to, writing words of hope, encouragement and appreciation. I believe the Arts in Medicine program not only benefits our patients, but our nurses as well. They continually get positive feedback from their patients through the program.” Kelly Crayton, MSN, RN, nurse manager on 4 T. Boone Pickens, agrees. “The Arts in Medicine program is phenomenal. On my unit we have art murals for patients and staff to color. It is a great de-stressor and we have all kinds of music – guitars, harps and our music therapist with her mobile wagon of instruments for patient and staff interaction. I feel blessed to work with so many talented people.”

Benny Barrett, Coordinator of the Arts in Medicine program

“Bringing arts and medicine together and uniting them in the soul of the patient is almost miraculous. I couldn’t be happier with the acceptance of the program by patients, family members and medical center staff.”
The Baylor University Medical Center Blood and Marrow Transplant Program (BMT) had another strong and successful year in 2016.

The team celebrated the addition of a new physician to the team (Jana Reynolds, MD) as well as the retirement of one of the program’s founding physicians (Joseph Fay, MD). Haploidentical transplantation expertise and volumes continued to grow over the course of the year and were aided by the new director of the Transplant Immunology Lab, Medhat Askar, MD. The program continued to maintain outreach clinics in Abilene, Longview, Fort Worth and Waco. Ongoing emphasis on clinical process improvement and patient survival resulted in further enhancements to 100-day and 1-year patient survival. New initiatives included a pilot of telehealth capabilities as well as a post-1 year survivor program. The Baylor Dallas BMT Program celebrated these successes with over 200 former patients and families at the annual BMT patient reunion in September.

Music and art therapists are master level graduates who provide clinical diagnosis using their specialty to assist the medical team in treating the patients holistically. They give a voice to those patients who cannot articulate with words where they are emotionally or mentally. Music practitioners are carefully trained and maintain certification in how to present therapeutic music in a variety of cancer situations. They are often called upon to visit patients throughout Baylor Dallas to help lower blood pressure, alleviate nausea, anxiety and boredom and assist patients gain peaceful slumber. The fully stocked art studio is open to patients, family members and staff and supported entirely by donations.

“The program achieved some major milestones in 2016,” said Barrett. “We were challenged by the rapid growth in the popularity of the program and the related demand for services. The floors where our music practitioners and music and art therapists visit patients have seen patient satisfaction scores improve. Bringing arts and medicine together and uniting them in the soul of the patient is almost miraculous. I couldn’t be happier with the acceptance of the program by patients, family members and medical center staff. For me personally, this is the most important and fulfilling assignment I have ever had in my life.”

<table>
<thead>
<tr>
<th>Number of participants</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of participants in Arts in Medicine program</td>
<td>6,088</td>
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<tr>
<td>Number of participants in music practitioner sessions</td>
<td>4,249</td>
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<tr>
<td>Number of cancer patients who participated in Arts in Medicine program</td>
<td>3,267</td>
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<tr>
<td>Number of participants in art therapy sessions</td>
<td>203</td>
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<tr>
<td>Number of performing arts events at the BUMC campus in 2016</td>
<td>615</td>
</tr>
<tr>
<td>Number of hospital units/areas that referred patients to the Arts in Medicine program in 2016</td>
<td>18</td>
</tr>
</tbody>
</table>

The fully stocked art studio is open to patients, family members and staff and supported entirely by donations. The program achieved some major milestones in 2016. The team celebrated the addition of a new physician to the team (Jana Reynolds, MD) as well as the retirement of one of the program’s founding physicians (Joseph Fay, MD). Haploidentical transplantation expertise and volumes continued to grow over the course of the year and were aided by the new director of the Transplant Immunology Lab, Medhat Askar, MD. The program continued to maintain outreach clinics in Abilene, Longview, Fort Worth and Waco. Ongoing emphasis on clinical process improvement and patient survival resulted in further enhancements to 100-day and 1-year patient survival. New initiatives included a pilot of telehealth capabilities as well as a post-1 year survivor program. The Baylor Dallas BMT Program celebrated these successes with over 200 former patients and families at the annual BMT patient reunion in September.
Chimeric antigen receptor (CAR) T cells are immune therapies designed to retrain lymphocytes, allowing the immune system to seek and destroy cancer cells. These therapies aim to unlock the power of the human immune system, unleashing it to seek cancer cells that have been engineered in the laboratory to produce CARs called T cells, to attack cancer cells, enabling the immune system to resume its job of clearing the body of disease. Since its inception in 1996, BIIR has been at the forefront of developing vaccines to treat cancer. Cancer vaccines are therapies designed to combat tumors that form from genetic mutations inside the body. Baylor Dallas and BIIR have been leading sites for the study of a particular type of immune cell called the dendritic cell, a key component of the immune system that is essential in cancer vaccines because of its capacity to capture, process and present antigens to T cells, which in turn attack the cancer.

BIIR’s cancer vaccines are based on the discovery that it is possible to extract blood from a patient, tease out the dendritic cells, sensitize them to tumor-specific antigens and then inject them back into that same patient to elicit a cellular response, essentially teaching T cells to kill the cancer. In recent years, including 2016, studies have contributed to an increased understanding of dendritic cell biology, including the existence of distinct subsets with specific functions and the distinct molecular mechanism that dendritic cells use to regulate the immune response. BIIR researchers have found that fusing antibodies with tumor cell-specific antigens produces a vaccine with broader applications, at lower cost, and available to a wide range of patients. BIIR has been refining this technology for more than a decade with support from the National Institutes of Health, and is preparing to take this approach to Baylor Dallas clinical trials for vaccines against head and neck cancer, breast cancer, and potentially more types of cancer. In 2016, BIIR continued to work on its first commercially available dendritic cell-targeting vaccine, one specifically designed to prevent cancer in those who are infected by the human papillomavirus (HPV). This vaccine is based on discoveries associated with a receptor called CD40, which is found on the surface of dendritic cells. Dendritic cells are key orchestrators of the human immune system, able to instruct T cells to kill cancer. According to a BIIR-led study published online Aug. 2, 2016, in Cancer Immunology Research, “These data suggest that CD40-targeting vaccines for HPV-associated malignancies can provide a highly immunogenic platform with a strong likelihood of clinical benefit.” The vaccine continued to be in clinical testing at Baylor Dallas for head and neck cancer. The next cancer type being considered for similar dendritic cell-targeting vaccines is breast cancer and pancreatic cancer.

Baylor Dallas has also been a leader in dendritic cell vaccine development for women with triple-negative breast cancer (TNBC). The goal of the trial was to create personalized vaccines using each patient’s own immune cells. The approach was to introduce cancer vaccines into patients who were still in a potentially curative setting, before the cancer became metastatic and spread to other parts of their bodies. Of the ten women originally enrolled in the trial and first receiving a dose of the vaccine in Dec. 2013, seven remain without any detectable disease, one had disease recurrence and two died from disease recurrence. The surviving women remain in the trial in a follow-up phase, waiting to see if they remain cancer-free.

Cancer Vaccines

Since its inception in 1998, BIIR has been at the forefront of developing vaccines to treat cancer. Cancer vaccines are therapies designed to combat tumors that form from genetic mutations inside the body. Baylor Dallas and BIIR have been leading sites for the study of a particular type of immune cell called the dendritic cell, a key component of the immune system that is essential in cancer vaccines because of its capacity to capture, process and present antigens to T cells, which in turn attack the cancer.
In 2015, the two-year Medical Oncology Fellowship program at Baylor University Medical Center at Dallas became a three-year combined Hematology Medical Oncology Fellowship program. The ACGME accredited program provides clinical training in all aspects of hematology and oncology. Fellows are afforded the opportunity to work with and interact with a comprehensive array of other medical specialties – pathology, radiology, internal medicine and associated sub-specialties, surgery and related sub-specialties. The program celebrated its 40th anniversary in 2016, counting more than 70 internal medicine physicians who have completed the Oncology Fellowship program and have gone on to work in various cancer specialty areas.

"We are proud of the Oncology Fellowship program’s history and the respect it has earned throughout the medical community," Micah Burch, MD, associate director of the Hematology Oncology Fellowship program and a physician on the medical staff of Baylor Dallas, says. "The program’s proud history has bolstered the respect it has gained across the medical community, in 2016, we continued to see an increased interest in the program and the enhanced caliber of the applicants seeking admission to the program. This is due, in part, to moving to a three-year combined program.”

Jointly sponsored by Texas Oncology and Baylor Dallas, the Hematology Oncology Fellowship program accepts two physicians each year from a pool of 100 applicants, 20 of whom have been interviewed by the selection committee. "The selection and matching process is similar to that followed by medical school graduates when they apply for a residency program," explains Dr. Burch. "Each member of the selection committee ranks the 20 interviewees. The interviewees also rank the Fellowship programs in which they are interested. In early December, a computer program matches candidates to Fellowship programs.”

Hematology Oncology Fellows rotate with different attending physicians on the medical staff at Baylor Dallas in the hospital and in the clinic each month, providing them with a comprehensive view of hematology and oncology.

"Within the first six months of their first year, we try to expose them to research opportunities that are available in their special areas of interest,” says Dr. Burch. "This may involve breast, lung and other types of cancers. We focus on involving every fellow in a research project that generally includes some type of quality improvement. By the time they complete the three-year program, the fellows have learned every aspect of oncology and hematology, including radiation oncology, gynecologic oncology and hematology, just to name a few. They are also given the chance to teach and give didactic lectures. Graduates of the program are board eligible for both hematology and oncology.”

"The program’s proud history has bolstered the respect it has gained across the medical community. In 2016, we continued to see an increased interest in the program and the enhanced caliber of the applicants seeking admission to the program.

""Micah Burch, MD
Associate director of the Hematology Oncology Fellowship program

2016 Hematology Oncology Fellows

3RD YEAR
Reghasit Acharya-Karmy, MD
Edward Pearson, MD

2ND YEAR
Anju Nair, MD
Leah Zhrebker, MD

1ST YEAR
Sanjiv Mathur, MD
Alicia Swink, MD
Background
Lung cancer is the second most frequently diagnosed cancer in the United States and is the leading cause of cancer-related death among men and women in the US. Lung cancer accounts for approximately a quarter of all cancer diagnoses, and it is projected to account for 1 in 4 deaths from cancer in the United States in 2017. Unfortunately, most lung cancer does not present with symptoms until it reaches an advanced stage when cure is not possible. For patients with stage I non–small cell lung cancer, surgery is the treatment of choice for medically fit patients. Traditionally, pulmonary resection for lung cancer was performed through a thoracotomy (open) incision. This required dividing the overlying chest wall muscles and spreading the ribs. The rib spreading in particular causes significant pain, challenges a patient’s pulmonary toilet, and clearly prolongs recovery. Recently, a minimally invasive resection technique has been developed called video-assisted thoracic surgery (VATS) that uses telescopic visualization and porthole incisions (2 cm in length) to perform lobectomy, the gold standard for pulmonary resection in lung cancer. This technique avoids damaging the overlying chest wall muscles and is performed without rib spreading.

Depend upon the location of the tumor in the lung, several techniques for surgical resection were utilized, for both curative and palliative intent. For patients with stage I non–small cell lung cancer, surgery is the treatment of choice for medically fit patients. Traditionally, pulmonary resection for lung cancer was performed through a thoracotomy (open) incision. This required dividing the overlying chest wall muscles and spreading the ribs. The rib spreading in particular causes significant pain, challenges a patient’s pulmonary toilet, and clearly prolongs recovery. Recently, a minimally invasive resection technique has been developed called video-assisted thoracic surgery (VATS) that uses telescopic visualization and porthole incisions (2 cm in length) to perform lobectomy, the gold standard for pulmonary resection in lung cancer. This technique avoids damaging the overlying muscles and is performed without rib spreading. The first VATS lobectomy was performed in 1994. In recent years, the utilization of VATS has increased both in the United States and abroad. Numerous studies have shown fewer complications with the use of VATS compared with open lobectomy and similar or better oncologic outcomes. These improvements included lower overall complication rates, less blood loss, lower pain scores, and shorter length of stay for VATS versus open lobectomy. Importantly, all studies suggest equal or improved oncologic outcomes. Despite the fact that the oncologic equivalence of VATS versus open lobectomy has been established in the literature and there can be no debate that VATS is less invasive, open lobectomy is still performed throughout the United States for tumors amenable to VATS lobectomy. While patient or technical considerations may preclude the universal use of VATS lobectomy, early stage (stage I) lung cancers should be resected or at least attempted through a minimally invasive procedure. VATS is the treatment of choice for medically fit patients. Traditionally, pulmonary resection for lung cancer was performed through a thoracotomy (open) incision. This required dividing the overlying chest wall muscles and spreading the ribs. The rib spreading in particular causes significant pain, challenges a patient’s pulmonary toilet, and clearly prolongs recovery.

Methods
The Baylor Scott & White Health Cancer Registry provided data on all lung cancer patients who underwent a surgical procedure at Baylor University Medical Center from January 1, 2013, to December 31, 2015. Surgical procedures were classified based on the Facility Oncology Registry Data Standards. The surgical approach for lobectomy was confirmed by review of electronic medical records for all patients with clinical stage I lung cancer.

Results
Between January 2013 and December 2015, 106 patients underwent surgery for lung cancer. The majority of these patients (116, 59%) had clinical stage I disease. Depending upon the location of the tumor and the involvement of adjacent structures, several techniques for surgical resection were utilized, for both curative and palliative intent. More than three-quarters of the procedures were lobectomies or bilobectomies, followed by wedge resection, pneumonectomies, and segmental resections. A total of 69 stage I patients underwent lobectomy/bilobectomy, of whom 63, or 91%, had a VATS lobectomy. Only that there were so few Open procedures performed, it was not possible to demonstrate trends in utilization of VATS. (Figure 1). In 6 of the 63 patients who underwent VATS, the surgeon started the lobectomy using VATS but converted to an open thoracotomy to safely complete the procedure. Baylor Dallas’s 91% VATS rate compares favorably to the 61.9% national average reported by the Society of Thoracic Surgeons during the same time period.
Conclusions

VATS is the standard of care for surgery for clinical stage I lung cancer when technical and safety considerations allow. At Baylor University Medical Center, 91% of all lobectomies for clinical stage I lung cancer were performed using VATS, which compares favorably to national standards.

References


Cancer Registry

Breast Cancer

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<td>30.0%</td>
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<tr>
<td>NHL: Image or pixelated-guided needle biopsy (zone or FNA) performed for the treatment of breast cancer (Accountability Measure Released Spring 2016)</td>
<td>90.0%</td>
<td>68.0%</td>
<td>87.5%</td>
<td>87.3%</td>
<td>100.0%</td>
<td>97.0%</td>
<td>95.0%</td>
</tr>
<tr>
<td>HT: Adjuvant Hormonal Therapy: Tamoxifen or third generation aromatase inhibitor is considered or administered within 1 year of diagnosis for women with hormone receptor positive breast cancer (Accountability Measure Released Fall 2008)</td>
<td>90.0%</td>
<td>90.0%</td>
<td>90.4%</td>
<td>93.2%</td>
<td>100.0%</td>
<td>98.0%</td>
<td>96.0%</td>
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<tr>
<td>MAC: Adjuvant Chemotherapy: Tamoxifen or third generation aromatase inhibitor is considered or administered within 1 year of diagnosis for women with hormone receptor positive breast cancer (Accountability Measure Released Fall 2008)</td>
<td>90.0%</td>
<td>92.0%</td>
<td>93.3%</td>
<td>93.3%</td>
<td>100.0%</td>
<td>98.0%</td>
<td>96.0%</td>
</tr>
<tr>
<td>ACT: Adjuvant Chemotherapy: Tamoxifen or third generation aromatase inhibitor is considered or administered within 1 year of diagnosis for women with hormone receptor positive breast cancer (Accountability Measure Released Fall 2008)</td>
<td>NA</td>
<td>92.0%</td>
<td>91.1%</td>
<td>93.3%</td>
<td>96.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>12RNL: Surgical resection includes at least 12 lymph nodes: At least 12 regional lymph nodes are removed and pathologically examined for breast cancer (Quality Improvement Released Fall 2008)</td>
<td>NA</td>
<td>90.0%</td>
<td>97.7%</td>
<td>93.0%</td>
<td>94.0%</td>
<td>92.0%</td>
<td>94.0%</td>
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<tr>
<td>RECt: Pre-operative chemo and radiation are administered for clinical AJCC T1-2N0 with pathology AJCC T3N0, T4N0, or Stage III; or treatment is considered or administered following any mastectomy for women with hormone receptor positive breast cancer (Accountability Measure Released Fall 2008)</td>
<td>85.0%</td>
<td>61.0%</td>
<td>84.8%</td>
<td>94.4%</td>
<td>100.0%</td>
<td>88.0%</td>
<td>97.0%</td>
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Bladder Cancer

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<tbody>
<tr>
<td>BL2RLN: Post cystectomy surgery adjuvant therapy is considered or administered within 1 year (365 days) of diagnosis for women with positive lymph nodes (Accountability Measure Released Fall 2015)</td>
<td>90.0%</td>
<td>66.0%</td>
<td>86.6%</td>
<td>81.8%</td>
<td>92.0%</td>
<td>97.0%</td>
<td>91.0%</td>
</tr>
<tr>
<td>G15RLN: At least 15 regional lymph nodes are removed and pathologically examined for cervical cancer (Quality Improvement Released Fall 2014)</td>
<td>NA</td>
<td>87.3%</td>
<td>88.9%</td>
<td>89.4%</td>
<td>75.0%</td>
<td>66.0%</td>
<td>90.0%</td>
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Non Small Cell Lung

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<tr>
<td>NSCLC: Chemotherapy and/or radiation administered to patients with Stage IIIC or IV Endometrium cancer (Quality Improvement Released Fall 2015)</td>
<td>NA</td>
<td>54.0%</td>
<td>54.6%</td>
<td>80.0%</td>
<td>80.0%</td>
<td>77.0%</td>
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</tr>
<tr>
<td>ENDCTRT: Chemotherapy and/or radiation administered in patients treated with primary radiation with curative intent in cases of cervical cancer (Quality Improvement Released Fall 2014)</td>
<td>94.0%</td>
<td>76.0%</td>
<td>77.0%</td>
<td>77.0%</td>
<td>77.0%</td>
<td>100.0%</td>
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</tr>
<tr>
<td>ENDICIC: Endocrine, laparoscopic, or robotic performed for any adrenocortical cancer (excluding cancers and sarcomas) for stage II or lower Stage III (Quality Improvement Released Spring 2015)</td>
<td>91.0%</td>
<td>74.0%</td>
<td>76.0%</td>
<td>78.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>ENDRT: Endocrine, laparoscopic, or robotic performed for any adrenocortical cancer for stage II or lower Stage III (Quality Improvement Released Spring 2015)</td>
<td>90.0%</td>
<td>74.0%</td>
<td>87.0%</td>
<td>86.0%</td>
<td>100.0%</td>
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Endometrial Cancer

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<tbody>
<tr>
<td>ENDRT: Endocrine, laparoscopic, or robotic performed for any adrenocortical cancer for stage II or lower Stage III (Quality Improvement Released Spring 2015)</td>
<td>90.0%</td>
<td>50.0%</td>
<td>52.0%</td>
<td>54.0%</td>
<td>54.0%</td>
<td>54.0%</td>
<td>54.0%</td>
</tr>
<tr>
<td>ENDICIC: Endocrine, laparoscopic, or robotic performed for any adrenocortical cancer (excluding cancers and sarcomas) for stage II or lower Stage III (Quality Improvement Released Spring 2015)</td>
<td>90.0%</td>
<td>40.0%</td>
<td>40.0%</td>
<td>40.0%</td>
<td>40.0%</td>
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Gastric

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<tbody>
<tr>
<td>NBX: Image or palpation-guided needle biopsy (zone or FNA) is performed for the treatment of gastric cancer (Quality Improvement Released Fall 2014)</td>
<td>NA</td>
<td>36.0%</td>
<td>37.1%</td>
<td>38.8%</td>
<td>63.0%</td>
<td>54.0%</td>
<td>51.0%</td>
</tr>
<tr>
<td>G3RLN: At least 15 regional lymph nodes are removed and pathologically examined for gastric cancer (Quality Improvement Released Fall 2014)</td>
<td>NA</td>
<td>90.0%</td>
<td>97.7%</td>
<td>93.0%</td>
<td>94.0%</td>
<td>95.0%</td>
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References

1. Source: Data is pending results by the Rapid Quality Reporting Process via the National Cancer Data Base.
2. The facility did not have to achieve these metrics.