Cancer Care
2018 Report to the Community
A message from our Executive Director

Chair, Emmanuel E. Zervos, M.D.
Raab Professor of Adult Oncology
Executive Director of Vidant Cancer Services

Dear Vidant Cancer Care Community,

In the pages ahead, Vidant Cancer Care proudly presents our annual report to the community for 2018. This year has been historic for our patients, our providers and caregivers and our community with the opening of the Eddie and Jo Allison Smith Tower at Vidant Medical Center in Greenville. This much anticipated event was punctuated by the ribbon cutting ceremony in March, concluding years of anticipation, planning and development and beginning a new chapter in cancer care not only in Greenville, but every community that Vidant Cancer Care touches. In these pages we hope that you will gain a better understanding of how our people and our programs impact the health and well-being of eastern North Carolina in a very positive way. People like Dr. Jasmin Jo and Dr. Warqaa Akram who have joined our team to offer hospital based specialty services previously limited or not at all in our region. You will read about an impressive scholarly footprint which, along with our academic partner the Brody School of Medicine, is seating our cancer programs at national forums alongside the best in the country. This year, the first annual Raab Multidisciplinary Cancer Symposium: Melanoma – Surgery, Immunotherapy, and Beyond was held on Friday, October 26th. Nationally recognized leaders along with regional experts met in Greenville to share their knowledge and expertise with local providers and staff. Finally, you will read about outreach events sponsored by our service line that add value and knowledge to the medical and rural communities we serve. Thank you for your ongoing support of our programs, thank you for your interest and thank you for helping Vidant Cancer Care become a national model of rural oncologic care.
Contents
Message from the cancer committee 2
2018 cancer committee 2
Goals for 2018 3
2018 accomplishments/recognitions 3
Clinical services 8
Symptom management clinic 9
Prevention clinics 9
Outpatient clinics 9
2018 Site Feature: Multidisciplinary Breast Care Clinic 10
Clinical trials 10
Cancer care navigation 11
Psychosocial distress screening 12
Survivorship care plans 12
Gamma Knife® Center 12
Outreach program 13
VMC community benefit 15
Support services 15
Cancer registry 18
Evidence-based outcome studies 19
Quality studies 19
Fundraising 20
New cancer facility 21

On the cover
The Eddie and Jo Allison Smith Tower is the new home to Vidant Cancer Care in Greenville.
Message from the cancer committee

The Vidant Health/Vidant Medical Center Cancer Care purpose is to become the premier provider of cancer care in eastern North Carolina, reducing mortality and improving outcomes through continued development of a sustainable, nationally recognized integrated system designed to provide ready access to prevention, early intervention, and quality, coordinated patient care. We are passionate about every facet of this work.

Our cancer committee continues to assure that high quality cancer care is in place to meet the needs of patients in eastern North Carolina. Team members, in conjunction with local private practice physicians, Vidant Medical Group physicians, and those from The Brody School of Medicine at East Carolina University, work together to provide comprehensive cancer care across our service area.

The Eddie and Jo Allison Smith Cancer Center and Bed Tower opened in March 2018. This impressive facility has enabled the enhanced delivery of efficient care and improved patient experience. It has also been a symbol of hope for those we serve and a magnet for mission-minded professionals from all over the world. We continue to focus on improving multidisciplinary care for the top five cancer sites, increasing clinical trial availability and accruals, reducing barriers to care through patient navigation, increasing public awareness of cancer prevention, early detection and screening, and collaborating with Vidant community hospitals to ensure seamless, high quality care across the continuum. We are honored to be the provider of tertiary cancer care for the east, driven by our love for the people here and the needs we see around us.

2018 cancer committee

Brian Brodish, MD, liaison physician
Vijay Chaudhary, MD
Karl Chiang, MD
Larry Dobbs, MD
Heng Hong, MD
Tae Juon Lee, MD
Andrew Ju, MD
Shachar Laks, MD, liaison physician
Darla Liles, MD, chair
Mahvish Muzaffar, MD
Daniel Moore, MD
Gina Murray, MD
Musharraf Nawaid, MD
Karyn Prenshaw, MD
Nitika Sharma, MD
Chris Thomas, MD
Nasreen Vohra, MD
Andrew Wel, MD
Jan Wong, MD

Emmanuel Zervos, MD
Michael Anglin
Tim Barnes, BS, RT(R,T)
Merrill Bright, RHIA, CTR
Kathye Bennett-Chambliss, RDN, LDN
Leslie Corbett, RN
Felicia Collins, RN, MSN, CRRN
Marilyn Davis, MDiv, LMBT, BCC
Phyllis DeAntonio, RN, MSN, FAAMA
Vickie Downing, RN, MSN, OCN
Susan Eubanks, RN, MSN, OCN
Kimberly Gardner, RN, BSN, OCN
Julie Hann, RDN, LDN
Leighann Henley, RN, BSN
Todd Hickey, FACHE
Jennifer Higgins, MSW, LCSW, OSW-C
Nikki Hyatt, BSN, OCN
Ken Jones, RN, OCN
Rosalyn Jordan, RN, MSN, OCN

Evelina Kolychev, PharmD, BCOP
Judy Koutlas, RN, MS, OCN
Suzanne Lea, PhD
Debra Mascarenhas, RN, BSN, CBCN
Vicki McLawhorn, DNP, RN, FNP-BC
Allyson Meyer, MS, CGC
Sarah Mizelle, MSW, LCSW
Tiffanie Moore, MPH
Janet Moye, PhD, RN, NEA-BC
Teresa Parent, RN, BSN, OCN
Chelsea Passwater, RN, MSN, OCN
Janet Reimer, RN, BSN, OCN
Barbara Rouse, community member
Micah Sam, BA
Debra Taft, FNP-C, AOCNP
Robbie Tilley, ACS
Catherine Wallace, PharmD, BCOP
Chris Wood, RT (R)(T) MBA
Goals for 2018

1. Programmatic goal: Develop a process to improve access to radiation oncology notes (currently in Aria) in Epic by November 2018 to assure coordinated, comprehensive clinical care.

2. Programmatic goal: To consolidate radiation services from separate models, academic and community-based, to one hospital-based practice by November 2018. This consolidation will include integration of policies and procedures, staffing models, physician practices, and American College of Radiology (ACR) accreditation.

3. Clinical goal: To increase the number of completed advance directives by 10 percent, resulting from early prognostic awareness discussions in the ambulatory setting by November 2018.

These goals were approved by the Cancer Committee in January 2018.

2018 Accomplishments

The following are some of the noteworthy accomplishments for 2018:

- Continued partnership between 4-CC Medical Oncology and Vidant Wellness Center to have personal trainers work with patients twice a week for inpatient Survivorship 101 program.
- Welcomed new physicians and staff: Kathryn Boswell – regional outreach coordinator; Kira Anderson – cancer registrar; Micah Sam – multidisciplinary cancer conference coordinator and quality liaison; Dr. Praveen Namireddy – hematology oncology; Dr. Jasmin Jo – neuro oncology; Lauren Tenace, PA – hematology oncology; and Dr. Warqaa Akram – colorectal surgery.
- Provided 1,342.68 community benefit hours, with value of $80,422.
- Lay Navigation program expanded to nine volunteer navigators.
- Provided cancer awareness/prevention/screening information to more than 11,423 people. Information disseminated via radio broadcasts, educational displays and packets, presentations, health fairs and information sessions. Provided more than 94 people with breast and head and neck cancer screenings.
- Offered professional educational programs for physicians, nurses, allied health professionals and registrars.
- The cancer registry responded to more than 143 data requests for research and outcome studies, including VMC site-specific information and case totals. Other requests included National Accreditation Program for Breast Centers (NAPBC) report, survivorship care plan data, eastern NC specific data comparisons and mortality projections, colorectal cancer stage 2 and 3 data for quality studies, stage 4 breast cancer patients receiving chemo quality study, and Chowan and Bertie counties lung cancer incidence with stage for low dose CT research.
- Held 9th Annual Pancreatic Cancer Awareness Dinner with 168 in attendance.
- Held 12th Annual Lung Cancer Awareness Dinner with 300 attendees.
- Pink Power event held at Rock Springs with over 900 in attendance, with shift to focus on breast and colorectal cancer awareness.
- Up to 88.53 percent chemotherapy administered as an outpatient.
- Clinical trials volume increased to 16.5 percent of annual caseload.

Research and presentations


• Lawing N, Muzaffar M: Electronic Medical Record Alerts to Improve High-risk Breast Cancer Patients Rate of Referral to Genetic Counseling. Unified Quality Improvement Symposium on January 31st, 2018 at the East Carolina Heart Institute at ECU.


• Nicole Lawing, Muzaffar M. North Carolina Medical Society’s (NCMS) Utilization of EHR to improve genetic risk assessment. Sept, 2017 Raleigh, NC


• Abdul Rafeh Naqash, Chipman Robert Geoffrey Stroud, Mahvish Muzaffar, Li V. Yang, Paul R. Walker. Survival stratification using a baseline inflammatory physiology based scoring system in advanced non-small cell lung cancer (NSCLC) treated with antiprogrammed cell death-1 (anti-PD-1) therapy. J Clin Oncol 36, 2018 (suppl 5S; abstr 152)
• Nicole Lawing. Muzaffar M. North Carolina Medical Society’s (NCMS) Utilization of EHR to improve genetic risk assessment. Sept., 2017 Raleigh, NC
• 2017-2018 Tulis, D. & Yang, L., Acid-sensing GPCRs in vascular inflammation and growth, Co-Investigator, GOV-National Institutes of Health (NIH).
• 2017-2018: Yang, L., Lertpiriyapong, K., & Hong, H., Role of the GPR4 receptor in intestinal inflammation and cancer., Principal Investigator, GOV-National Institutes of Health (NIH).
• 2017-2018: Yang, L., Role of GPR65 in Immune Cell Function and Diabetic Nephropathy, Boehringer Ingelheim Pharmaceuticals, Inc.
• Lee, MH NIH Role of PUF-8/Pumilio in GLP-1/Notch-Mediated Germline Proliferation in C. elegans. 2015-2019, $367,275 (Role: PI)
• Lee MH NSF mRNA Selection by eIF4E Isoforms and Their Sequestering Factors. 2017-2020, $634,696 (Role: Co-PI, PI: Brett Keiper)
• Lee, MH Brody Brothers Endowment Grant Pumilio 2 as a potential target for bone marrow adiposity 2018, $45,000 (Role: PI)
• Liles, D Knupp C Vidant Community Benefits grant-Sickle cell Outpatient treatment center expansion.
• Liles, D Rivenbark C Knupp C Pfizer Grants for Learning and Change Rural Education for Sickle Cell Quality Improvement (RESC-Q): Teaching Primary care and Emergency Department providers about the pathophysiology and clinical guidelines for Sickle cell anemia. 10/1/2018 to 12/30/2019
2018 accomplishments continued

- Multi-institutional project Leonard S Liles D The Sickle cell
  Trevor Thompson Transition Project (ST3P-UP Trials) PICORI
  funded
- Walker, PR July 2017, Correlation of Circulating Micro-
  particles, Soluble P-Selectin and Anti-Annexin A2
  Antibodies with Thrombosis and Their Prognostic Value
  in Lung Cancer patients Receiving Immune Checkpoint
  Blockade Therapy. (Lung Cancer Initiative of North Carolina,
  $25,000
- Walker PR 2017-2018]: Walker, P . R. Lung Cancer Surgery:
  Decisions Against Life Saving Care- The Intervention,
  Principal Investigator, American Cancer Society / UNC.
- Wong J Muzaffar M Vohra N Title: Proposal No:18-0147
  - Improving the Quality of Breast Cancer Care in an
    Underserved Rural Setting. Funding Agency/Sponsor:
    National Comprehensive Cancer Network. Start Date: 2018-
    01-01-End Date: 2019-12-31. Status: Funded: $230,000 Role:
    Co Investigator.
  International Journal of Molecular Sciences 18(12): 2729.
  DOI: 10.3390/ijms18122729.
- Naqash A.R., Stroud C.R.G., Butt M.U., Dy G.K., Hegde A.,
  Muzaffar M., Yang L.V., Hafiz M., Cherry C.R., Walker PR.
  (2017). Co-relation of overall survival with peripheral blood-
  based inflammatory biomarkers in advanced stage non-
  small cell lung cancer treated with anti-programmed cell
  death-1 therapy: results from a single institutional database.
  PR. (2017). Interleukin-6 as one of the potential mediators
  of immune-related adverse events in non-small cell lung
  cancer patients treated with immune checkpoint blockade:
  evidence from a case report. Acta Oncologica 2017 Nov
- Justus C.R., Sanderlin E.J., Dong L., Sun T., Chi J.T.,
  Lertpiriyapong K., Yang L.V. (2017). Contextual tumor sup-
  pressor function of T cell death-associated gene 8 (TDAG8)
  in hematological malignancies. Journal of Translational
  Medicine 15: 204. DOI: 10.1186/s12967-017-1305-6.
- Wen Y., Chen Z., Lu J., Ables E., Scemama J.L., Yang L.V., Lu
  of 3D morphology between viable and apoptotic MCF-7
  breast cancer cells and characterization of nuclear fragmenta-
  pone.0184726.
- McCubrey J.A., Lertpiriyapong K., Steelman, Abrams S. L.,
  Yang L.V., Murata R.M., Rosalen PL, Scalsi A., Neri LM, Cocco
  L., Ratti S., Martelli A.M., Laidler P., Dulinska-Litewka J., Rakus
  D., Gizak A., Lombardi P, Nicoletti F, Candido S., Libra M.,
  Montalto G., Cervello M. (2017). Effects of resveratrol, cur-
  cumin, berberine and other nutraceuticals on aging, cancer
  development, cancer stem cells and microRNAs. Aging 9(6):
  1477-1536. DOI: 10.18632/aging.101250.
  cellular ROS in Caenorhabditis elegans using 2′,7′-dichloro-
- Yoon DS, Choi Y, Cha DS, Zhang P, Choi SM, Alfhili MA, Polli
  JR, Pendergrass D, Taki FA, Kapalavati B, Pan X, Zhang B.,
  SKN-1/Nrf2-Mediated Oxidative Stress Response in C.
  elegans and Human Mesenchymal Stem Cells. Scientific
  Reports 7(1):12592. Corresponding authors.
  ERK regulatory network controls the number of sperm by regulating timing of sperm-oocyte switch in C.
- Lee MH and Yoon DS (2017) A phenotype-based RNAi
  screening for RasERK/MAPK signaling-associated stem cell
- Cheon SM, Jang I, Lee MH, Kim DK, Jeon H, and Cha DS
  (2017) Sorbus alnifolia protects dopaminergic neuro-
- Hegde, C. Cherry, G. Stroud, R. Pinnamaneni, S. Cherukuri,
  M. Bowling, H. Arastu, P.R. Walker. Efficacy of Programmatic
  Combined Stereotactic Ablative Radiotherapy and
  Anti-PD-1 Therapy in Advanced Lung Cancer: A
  Retrospective Analysis. J Thoracic Oncology 12:11S1,
  S1556, 2017.
- A. R. Naqash, C.R.G. Stroud, C. Cherry, M. Muzaffar, m.
  Bowling, PR Walker. Predictive Utility of C - reactive pro-
  tein (CRP) in Advanced Stage Lung Cancer Treated with
  Anti-programmed Cell Death-1 (PD-1) Therapy. J Thoracic
  Oncology 12:11S1, S1559, 2017.
- C. R. G. Stroud, A. Hegde, A. R. Naqash, C. Cherry, T. Parent,
  J. Hardin, PR. Walker.Tocilizumab for the Management of
  Immune Mediated Adverse Events Secondary to PD-1
  blockade: Overall Survival Analysis. J Thoracic Oncology
  12:11S1, S1554, 2017.


• Muzaffar M, Atluri PM, Liles D. Acute Inflammatory Demyelinating Polyradiculoneuropathy secondary to Ifosfamide. Am. J. ther. 2017 Nov 27


• Jasmin Jo, Joseph Donohue, Gina Petroni, David Schiff. NCMPI-31: Risk of intracranial hemorrhage in patients with high-grade glioma on therapeutic low molecular weight heparin. Neuro-Oncology 20 (suppl_6):vi200-vi200, November 2018


• Jasmin Jo, Kathryn Nevel, Ryan Sutyla, Mark Smolkin, M. Beatriz Lopes, David Schiff. Predictors of early and recurrent seizures in low-grade glioma. Neurology 90 (suppl_15) p6.160, Apr 2018

Nursing recognition

• Phyllis DeAntonio, RN, MSN, FAAMA, system service line administrator – Vidant Cancer Care, was inducted into the ECU College of Nursing Hall of Fame.

• Chelsea Passwater, MSN, RN, AGCNS-BC, OCN, received a scholarship to attend the annual Oncology Nursing Society (ONS) Congress.

• Six oncology nurses, Denise Brigham, Leslie Corbett, Debra Mascarenhas, Lashawn McDuffie, Chelsea Passwater, Beverly Willoughby, attended ONS Congress.

• Debra Mascarenhas and Janet Reimer presented a navigation poster, “VCC Nurse Navigation: Examining the Correlation Between Caseload and Acuity” at ONS Congress.

• Chelsea Passwater had poster “Central Venous Line Home Care: Standardization Through a Nurse and Patient Education Initiative” presented at ONS Congress.

• Judy Koutlas, RN, MS, OCN, manager oncology navigation, and Kim Hawkins, BSN, RN IV, surgical oncology, named as Great 100 Nurses of North Carolina.

• Debra Taft, FNP-C, AOCNP, medical oncology nurse practitioner, received the St. Martin of Tours Award. The award is given to employees of various disciplines to recognize the
2018 accomplishments continued
compassionate, culturally sensitive, quality care given to patients, families, and staff, while incorporating chaplains as an integral part of the treatment team.

- Teresa Parent, RN, BSN, OCN, represented the team at the 2018 Addario Lung Cancer Foundation Centers of Excellence Summit.

Clinical services

Inpatient Medical Oncology – 4th Floor Cancer Center

Our medical oncology unit, 4-Medical Oncology, provides 48 beds with the ability to serve general, general monitored, and intermediate level patients. This supports our goal of providing continuity of care for patients throughout their treatment plan. Specialty-trained physicians and nurses provide comprehensive care to adult patients with all types of hematologic and oncologic diseases.

The medical oncology team consists of hematology/oncology providers, hospitalists, and advanced practice providers who collaborate to develop and execute a comprehensive plan of care. The interdisciplinary team also includes nurses, nursing assistants, unit secretaries, nurse and social work case managers, recreational therapists, oncology pharmacists, physical/occupational therapists, dietitians, a professional development specialist and a clinical nurse specialist.

Staff nurses are encouraged and supported in their professional and specialty growth. Clinical ladder opportunities facilitate nurses in addressing patient educational and clinical needs, as well as provide opportunities to promote expertise in bedside nursing. The medical oncology unit supports and participates in the local Oncology Nursing Society chapter. The chapter provides educational opportunities for nurses. Focus is on increasing the number of Oncology Certified Nurses (OCN) which validates expertise in this field of nursing.

A healing environment is necessary to achieve the best patient outcomes. Promoting this on the medical oncology unit has been a joint effort between the staff, patients and their families. In March, we moved into our new space in the Eddie and Jo Allison Smith Cancer Tower where we are fortunate to have state of the art facilities and equipment. Vidant Wellness Center

Inpatient Surgical/Oncology Unit – 2nd Floor Cancer Center

The Surgical Oncology unit, 2-Surgical Oncology, consisting of 32 beds, provides care to general, general monitored, and intermediate levels of care. We offer a seamless transition from surgical oncology to medical oncology. Patient care is provided for the following surgical sub-specialties: gastrointestinal, genitourinary, head/neck and gynecology. Our surgical oncology team is interdisciplinary and is made up of physicians, advance practice practitioners, nurses, nurse case manager, social work case manager, dietitian, pharmacist, physical/occupational therapists, and nursing assistants. The surgical staff utilizes a team approach with preoperative and postoperative care. This collaborative approach provides patients and their families with the knowledge and skills necessary for transitioning to independence and recovery in their home environment. High quality care and clinical decisions respectfully include the patients’ preferences, values and needs.

Professionalism, compassionate care and a commitment to continuous improvement are key qualities of our health care team, with a priority focus on competency training. Physicians and nurses engage in the unit and hospital practice councils for decision making and clinical practice recommendations. The team also participates in quality improvement projects to bring awareness to quality initiatives and improve patient experience and outcomes. Nursing development is encouraged through advancement in higher level degrees, professional organizations, specialty certifications and participation in professional clinical pathways. This year we are honored to recognize our unit quality representative and charge nurse, Kim Hawkins, BSN, RN IV, as a 2018 Great 100 Nurse of North Carolina.
**Palliative Care Unit – 2nd Floor Cancer Center**
The Palliative Care Unit occupies the remaining 16 beds on the second floor of the new tower, providing services to cancer patients and other patients requiring symptom management and care for life-limiting illnesses.

**VMC Infusion Center**
The new VMC Infusion Center opened in March inside the new Eddie and Jo Allison Cancer Tower. It is designed to deliver chemotherapy, blood products and other infusions in an outpatient setting. A primary goal of the Infusion Center is to deliver necessary treatments and therapies to patients while allowing them to maintain their normal life routines as much as possible. We offer the best of both worlds by providing an outpatient service located within a major medical center.

The Infusion Center treats 70-80 patients daily from across the east. Currently, the center has 12 private rooms and 48 infusion chairs. We also offer a dedicated space for quick treatments such as injections and port flushes. The Infusion Center features multiple amenities to keep our patients comfortable and entertained during their stay -- reclining chairs with heat and massage, beautiful views of our gardens, and individually controlled televisions. These televisions are equipped with state of the art patient engagement technology offering education, entertainment, and relaxation features. Art and music therapy are provided by students from East Carolina University. The infusion suites are built around a beautiful healing garden that is accessible from inside the center. This garden is open to patients and families, and has tables, benches and a walking labyrinth.

The lab is located adjacent to the Infusion Center to ensure efficiency in result time. There is also an onsite pharmacy to provide safe and timely access to chemotherapy, decrease patient wait times and increase patient satisfaction. Shuttle and valet services are available to all patients and families to assist with transportation to and from the parking areas.

The Infusion Center staff of nurses, care partners, and unit secretaries work closely with all referring providers. Nurses are chemotherapy certified with an average of 15 years of nursing experience. Eleven are certified oncology nurses and several others are working toward this goal, which is the gold standard of oncology nursing. Every Infusion Center nurse has a true passion for oncology patients.

**Symptom Management Clinic**
The Symptom Management Clinic (SMC) is located within the Infusion Center and began seeing patients in July 2017. The clinic is open five days a week from 8:00 am until 5:00 pm, with the last appointment available at 3:30. There are significant side effects to many cancer treatments, and this clinic was created to help patients manage those symptoms as early as possible. The goals for the SMC are to avoid emergency room visits, provide better access to care, improve clinic workflow, reduce length of stay/readmission, increase patient centered care, and decrease cost. Patients may call the clinic nurse or disease-specific navigator to report symptoms and referrals are made for a same day appointment. Patients may be seen in the SMC for fever, chills, generalized fatigue, nausea, vomiting, diarrhea, dyspnea, pain, decreased appetite, and wound/drain issues. The clinic is staffed by our oncology nurse practitioners Vicki McLawhorn and Debra Taft. Any cancer patient undergoing treatment may be seen. All physicians and staff are encouraged to refer patients to this needed service.

**Prevention Clinic**
After several years of planning, the Prevention Clinic began operating in the cancer tower on November 30. A risk assessment tool is given to patients for completion prior to their appointment and is reviewed by the oncology nurse practitioner during the appointment. Many services are available including personal and family history, risk assessment with referrals as needed, physical examination, review of results, personalized plan for wellness, cancer screenings and referral to genetic counselor or tobacco cessation treatment specialist. The clinic is open on Fridays from 8 am – noon, serving any individual who wants to know more about their risk for cancer.

**Outpatient Clinics**
Within the past year we have experienced several beneficial changes to our outpatient oncology clinical areas. The first and foremost is consolidation of all services for oncology. The March 2018 move into the new cancer tower has provided us the ability to offer ambulatory clinical services, infusion services and radiation therapy services to our ambulatory patient population in one building. We have more than doubled our ambulatory clinical space, with 58 exam rooms, allowing more patients the opportunity to receive treatment at our facility.

We continue to focus on a patient centered approach to cancer. Disease specific cancer conferences and coordinating patient appointments with our multidisciplinary teams allow for a more coordinated approach. Additional programs have been identified to improve patient care as well including improving patient/family education, access to the Symptom Management Clinic to avoid delays in symptom management and private consultation space for patient/family conference. We have added specialty providers including a neuro-oncologist, cardio-oncologist and a colorectal surgeon to our practice, affording patients the most up-to-date care.
2018 Site Feature: Multidisciplinary Breast Care Clinic

Our Multidisciplinary Breast Clinic (MBC) brings together a team of specialists including breast surgeons, radiation and medical oncologists, as well as other professionals who provide supportive care services. A weekly conference is held to review and formulate the best individualized treatment plan for every new breast cancer patient. Radiologists and pathologists present diagnostics to the team that show the unique features of the cases discussed. The MDC offers the expertise and medical opinions that provides options and incorporates the patient in shared decision making with their team.

Certification: American College of Surgeons Commission on Cancer

• National Accreditation Program for Breast Cancer – reaccredited December 2018
• American Society for Radiation Oncology

Hours of Operation: 8:00 am – 5:00 pm Monday through Friday (with exceptions for holidays)

Contact Information:
Website: VidantHealth.com/Cancer
Appointments: 252-816-2273
New Patient/Referrals: 252-816-7000

Breast Wellness Program Leadership

Dr. Jan H. Wong serves as director of the Breast Wellness Program. As leader and moderator, his responsibilities include maintaining the schedules for the Multidisciplinary Conference, as well as maintaining CME credit, monitoring patient quality and steering the conference in the appropriate direction. He also helps decide what new technologies will be available to the patients that are served and when any surgical intervention is necessary. Other new technologies are screened through the appropriate representatives of each discipline. Additionally, Dr. Wong provides quality assurance to the hospital’s cancer registrar by monitoring breast cancer staging hospital wide.

Breast Wellness Center Care Team

• Medical Oncology: Dr. Pamela Lepera, Dr. Mahvish Muzaffar, Elizabeth Gottsch, PA-C
• Surgical Oncology: Dr. Jan H. Wong, Dr. Nasreen Vohra, Dr. Daniel Richardson, Dr. Richard Zeri, Nancy Lopez, PA-C
• Radiation: Dr. Hyder Arastu, Dr. Cynthia Ballenger, Dr. Andrej Hnatov, Suzanne Woolard, NP
• Pathology: Dr. Gina Murray, Dr. Karyn Prenshaw
• Genetics Counseling: Allyson Meyer, MS
• Nursing Staff: Heather Yoder, RN, Stefanie Johnson, RN
• Nurse Navigator: Debra Mascarenhas, RN
• Clinical Trials: Renee Coghill, RN
• Support/Survivorship: Jenny Higgins, MSW, LCSW
• Cancer Registrar: Merrill Bright, CTR
• Social Workers: Sarah Mizelle, SW, Ashley Williams, SW

Clinical trials

The joint East Carolina University–Vidant Cancer Care Oncology Clinical Trials Office coordinates and facilitates clinical research to improve the cancer care of tomorrow and provide patients in eastern North Carolina with access to novel therapies and the latest advancements in cancer care. Patients are seen in the outpatient setting at the cancer tower. Our participation in the research process establishes a connection with the National Cancer Institute and the National Clinical Trials Network (NCTN) oncology cooperative groups that currently include Alliance, NRG, ECOG-ACRIN, and SWOG. Our ECU pediatric hematology oncology physicians are active members of the Children’s Oncology group, which allows them to provide the latest therapies to our children diagnosed with cancer. ECU maintains a collaborative relationship with UNC-Chapel Hill Cancer Network. Through this collaboration our ECU surgical oncologist maintains a tumor tissue bank, which allows bench research physicians access to clinical tumor samples for development of new therapies. In addition, our own oncology physicians write protocols to specifically meet the needs of our patient population. Some of these include translational research that provide the backbone for which bench research may be relevant in clinical treatment. We work directly with pharmaceutical companies on selected studies that can offer emerging new therapies not otherwise available.

We have had a significant increase in the number of new cancer trials available to patients over the past three years as well as an increase in the number of patients who are willing to participate.
The following summarizes accrual information for calendar year 2018.

**Clinical trials**  
January 1 – December 31, 2018

<table>
<thead>
<tr>
<th>Category</th>
<th>Adult</th>
<th>Pediatric</th>
<th>Total accruals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevention trials</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Screening trials</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Treatment trials</td>
<td>135</td>
<td>21</td>
<td>156</td>
</tr>
<tr>
<td>Quality of life trials</td>
<td>13</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td>Other</td>
<td>206</td>
<td>0</td>
<td>206</td>
</tr>
<tr>
<td>Total adult patients accrued</td>
<td>354</td>
<td>21</td>
<td>375</td>
</tr>
<tr>
<td>Prevention trials</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Screening trials</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Treatment trials</td>
<td>21</td>
<td>0</td>
<td>21</td>
</tr>
<tr>
<td>Quality of life trials</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total pediatric patients accrued</td>
<td>21</td>
<td>0</td>
<td>21</td>
</tr>
</tbody>
</table>

**Cancer care navigation**

Patient navigation involves individualized assistance to cancer patients, families and caregivers to help overcome health care system barriers and facilitate timely access to quality medical and psychosocial care during all phases of the cancer journey. Navigators provide education and support, and link patients to needed resources. All cancer patients have access to navigators at Vidant Medical Center, who often coordinate with regional navigators to provide care closer to home. In 2018, our navigation team assisted with transitioning care to local regional sites for approximately 400 patients. We served an average of 600 cancer patients and their families monthly. In addition, our team provided more than 7,000 encounter visits throughout the year, which included identifying barriers to care and linking patients to much needed support services and programs. Our navigators served patients living in all 29 counties of eastern North Carolina and beyond.

Collaboration among our regional navigation team provides for seamless, timely access to quality cancer care across the health care system for every cancer patient. All navigators work to improve communication among providers across our system. More than 3,000 patient encounters in 2018 involved multidisciplinary care coordination by our navigation team. In addition, we provided 4,600 educational sessions and coordinated 3,500 timely appointments. The team of 14 professional navigators, including nurses and social workers, met quarterly to collaborate and improve the overall patient experience while overcoming barriers to care.

Navigators referred 1,000 patients and their families to local and national programs that provided assistance for medications, transportation and many additional expenses related to cancer treatment. With the support of two Vidant Health Foundation grants sponsored by Bank of America and One of Us, cancer patients received financial assistance for daily living expenses such as rent, food, and utilities, as well as medication and travel expenses. The navigators referred more than 1,200 patients to supportive care service members including dietitians, financial counselors, social workers, genetic counselors and many others who assist throughout the continuum. We facilitate Caring Conversations and Making It support groups and routinely participate in survivorship programs including annual community events for breast, lung, and pancreatic cancer awareness. The team consists of expert speakers and provide education at numerous community events for early detection, screening, and prevention programs.

We further expanded our volunteer non-clinical navigation team with the support of a statewide training program in partnership with University of North Carolina at Chapel Hill and grant funded by the Duke Endowment. These volunteer navigators provide non-clinical, one-on-one assistance to patients and families who need support and guidance through their illness. They check on patients by phone after treatments, offer to accompany those who are alone to appointments and visit them during their inpatient stays. Working with nurse navigators and social workers, they identify patients in need of their services. As needed, they provide tours of the new resource room, share information about survivorship programs and local and national resources.

**VMC cancer care navigators**

<table>
<thead>
<tr>
<th>Clinical navigator/area of specialty</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Judy Koutlas, RN, MS, OCN, manager skin cancers</td>
<td>252-814-3580</td>
</tr>
<tr>
<td>Kimberly Gardner RN, BSN, OCN Gastrointestinal cancers</td>
<td>252-717-1931</td>
</tr>
<tr>
<td>Ken Jones, RN, BSN, OCN Brain cancers</td>
<td>252-714-5072</td>
</tr>
<tr>
<td>Debra Mascarenhas, RN, BSN, CBCN Breast cancers</td>
<td>252-341-0917</td>
</tr>
<tr>
<td>Teresa Parent, RN, BSN, OCN Lung and esophageal cancers</td>
<td>252-341-0834</td>
</tr>
<tr>
<td>Amanda Pendry, RN, OCN Hematologic malignancies and skin cancers</td>
<td>252-531-2680</td>
</tr>
<tr>
<td>Janet Reimer, RN, BSN, OCN Head and neck cancers; genitourinary cancers</td>
<td>252-341-3688</td>
</tr>
</tbody>
</table>
Cancer care navigation continued

We have also piloted having volunteer navigators involved in the breast cancer clinic providing educational videos and materials along with support and links to necessary resources like wigs and prosthesis.

Nurse navigators continue to develop professionally through involvement at both local and national levels in oncology nurse navigation.

Debra Mascarenhas and Janet Reimer represented Vidant Medical Center at two national oncology nursing meetings with the accepted poster, “Oncology Nurse Navigation: Examining a Correlation between Caseload and Acuity.” Teresa Parent represented the team at the 2018 Addario Lung Cancer Foundation Centers of Excellence Summit. Judy Koutlas presented at two sessions at the Oncology Navigation Summit including: “Navigation 101, Ask the Expert: Sharing Navigation Challenges for Success,” and “Taking it Home: Bringing Lessons Learned Back to your Practice.” She also presented at two local conferences on the role of navigation in cancer care and survivorship.

<table>
<thead>
<tr>
<th>Non-clinical volunteer navigators</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Kassie Balestrieri</td>
<td>Judy Plymale</td>
</tr>
<tr>
<td>Nick Balestrieri</td>
<td>Lina Shammas</td>
</tr>
<tr>
<td>Michael Grubey</td>
<td>Dana Shefet</td>
</tr>
<tr>
<td>Ruggie MacKenzie</td>
<td>Susan Waldrum</td>
</tr>
</tbody>
</table>

Psychosocial distress screening

Standard 3.2

Standard 3.2 outlines criteria for accredited facilities to implement a process to assess oncology patients for distress during pivotal points throughout their care. This process includes having patients complete a screening tool referred to as the Distress Thermometer. The tool focuses on the level of distress the patient has had during the past week. It also identifies specific areas of concern/problems and the level of distress associated with them. The total number of screenings in 2018 was 1,078. The location of pivotal points and number screened were: clinic visits – 422; chemotherapy – 100; radiation – 534; and unknown – 22. Based on reported distress, the following are listed in order of most frequently reported areas of concern: 1st – physical; 2nd – emotional; 3rd – practical. Referrals are made to case managers for practical concerns, to hospital chaplains for spiritual concerns, to licensed clinical social worker for emotional or family concerns to nurse, navigator, physician, etc. for physical problems. There are a wide array of integrative therapies offered including yoga, tai chi, meditation, art therapy, music therapy, small group exercise, reiki, massage, journaling, aroma therapy and support groups. Work continues with Information Systems to have a screening process that is more efficient and effective in the electronic health record. Work is also beginning on the implementation of the distress screening in private practice offices.

Survivorship care plans

Every individual diagnosed with cancer is a survivor starting on day 1. The number of cancer survivors living every day is consistently growing due to earlier diagnosis, advances in treatment and an aging population. There are more than 15 million cancer survivors in the U.S. This number is expected to exceed 18 million by 2020. The Survivorship Care Plan (SCP) is a record that summarizes and communicates what occurred during active cancer treatment, recommendations for follow-up care and surveillance testing, referrals for support services the patient may need going forward and other pertinent information of the survivor’s short and long term care. To meet the Commission on Cancer accreditation in 2018, 50 percent of all eligible patients who are stage 1-3 who have completed curative-intended treatment needed to be provided with a SCP. It is developed specifically for each individual patient within the electronic health record (EHR) based on diagnosis. During a follow-up clinic visit, the doctor or nurse discusses all the information and recommendations related to the treatment received, including staging, when to see their doctor, what long-term effects to expect, and how to stay healthy. Additional pamphlets related to eating right and exercising are incorporated into the survivorship packet. The care plan is also sent to the primary care physician to improve communication to ensure other important health screenings are being done.

Our survivorship care team consists of physician specialists, advanced practice providers, navigators and nurses. Through their team effort, we provided SCPs to over 70% of all eligible cancer survivors.

Gamma Knife® Center

Gamma Knife offers hope for patients with brain lesions that were once considered inoperable. The use of Gamma Knife alleviates much of the pain, scarring and long recovery time normally associated with cases treated with intracranial surgery.

Gamma Knife gives surgeons the ability to effectively treat abnormalities in the brain through stereotactic radiosurgery. Stereotactic radiosurgery is defined as the delivery of a single high dose of radiation to a small and critically located intracranial target without opening the skull. Physicians can remove intracranial lesions by focusing multiple gamma rays on a precisely defined target.
The Gamma Knife Perfexion was upgraded to the ICON in October and November. The first patient was treated on December 3. The ICON gives clinicians the option to perform single or fractionated frame-based or frameless treatments. This allows for more individualized delivery without sacrificing precision and accuracy. In addition, the new ICON allows treatments close to critical structures and easier retreatment of brain metastases patients presenting with new or recurring lesions.

**Indications for Gamma Knife therapy**

Patients undergoing Gamma Knife radiosurgery are evaluated by a team of specialists including neurosurgeons and radiation oncologists. Diagnoses that indicate the need for Gamma Knife therapy include:

- Meningiomas, acoustic neuromas, pituitary adenomas, craniopharyngiomas and other benign tumors
- Trigeminal neuralgia
- Primary or recurrent malignant brain tumors including astrocytomas and oligodendrogliomas
- Brain metastases
- Arteriovenous malformations (AVMs) and cavernous malformations

**Outcomes**

- Patient satisfaction surveys in the mid-90 percentile
- Metastatic brain tumors, the No. 1 indicator for Gamma Knife
- Excellent success at achieving local control of disease in these patients
- Superb outcomes for control of tumor size in patients with benign tumors such as meningioma and acoustic schwannoma
- Increased awareness of Gamma Knife treatment among referring physicians due to efforts by Vidant Marketing, Communications and Physician Relations.

**Outreach program**

**Awareness and prevention**

According to the Center for Disease Control, cancer continues to be the leading cause of death in North Carolina. The majority of cancer deaths occur from colorectal, pancreatic, lung, breast and prostate cancers (NC Central Cancer Registry, 2017). Since most cancers are related to modifiable risk factors such as smoking, diet and activity, Vidant Cancer Care continues to value outreach and bringing awareness to prevention and early detection of cancer.

Colorectal cancer continues to be the second leading cause of cancer death in North Carolina, though it can be prevented through regular screening. Vidant Cancer Care joined the national initiative to have 80 percent of eligible adults screened for colorectal cancer by 2018. This movement started by the National Colorectal Cancer Roundtable will continue into 2019, and Vidant Cancer Care continues to pour great effort into this goal. An outreach coordinator has developed partnerships with 19 businesses and 16 churches across the 29-county region of
Outreach program continued
eastern North Carolina. The primary aim of these partnerships is to raise awareness about colorectal cancer screening in creative and meaningful ways. This has included giving presentations during Sunday morning or Wednesday night church services, distributing written information about screening and symptoms, attending health fairs and coordinating events with colorectal cancer as the primary theme. One of the businesses participating in this partnership is mailing monthly birthday cards to employees and offering to facilitate making appointments for colorectal cancer screening.

One of the most exciting accomplishments within this initiative was having a colorectal cancer survivor be the keynote speaker at Vidant Health’s annual Pink Power events. This year, Vidant Cancer Care embraced “pink power” by sharing cancer information with women in the area. Approximately 2,500 attendees across the region heard Brenda Elsagher use her gift of comedy to share about the difficult topic of colorectal cancer. The crowd found her hilarious and charming while conveying the absolute necessity of colorectal cancer screening. Vidant Medical Center hosted its Pink Power dinner event on October 16th, with over 900 in attendance. The theme – Finding Joy in Your Journey – was beautifully demonstrated by Brenda’s personal story with colorectal cancer. She inspired those in attendance to find joy in all circumstances each and every day. The newest member of our colorectal cancer treatment team, Dr. Warqaa Akram, was introduced to the community at Pink Power this year. During her talk, she emphasized the importance of early screening for colorectal cancer.

On November 12, Vidant Cancer Care hosted its 12th annual Lung Cancer Awareness Dinner. Taylor Duck, an eleven-year lung cancer survivor, shared her touching story. The event was attended by approximately 300 community members who learned about the prevention and early detection of lung cancer, the leading cause of cancer death in eastern North Carolina.

Cancer screening
For our screening programs, Vidant Cancer Care follows national guidelines such as American Cancer Society and the United States Preventive Services Task Force. Research shows that screening for certain types of cancers helps find cancer early, when it is more treatable. We have been excited this year to offer several cancer screenings in the new cancer tower, focusing on our commitment to the “power of early” by aiming to catch cancer at earlier stages.

Two breast cancer screenings were held this year for women who are uninsured. They were held in the new tower. Free clinical breast exams, mammograms and education were provided to 22 women without insurance and who met the financial guidelines. These women were provided with information on local resources to assist them in completing yearly mammograms and cervical cancer screening at no cost. No positive results were found.
Two head and neck cancer screenings were also offered in the new cancer tower. In total, 69 adults were screened for head and neck cancer. Our physician partners from the East Carolina University School of Dental Medicine and Eastern Carolina Ear, Nose and Throat joined us as we provided education on the risk factors for head and neck cancer, including human papilloma-virus and tobacco use, and provided free screenings to community members. Several positive results were found requiring further evaluation by physicians.

In lung cancer specifically, early diagnosis and treatment is critical due to the poor prognosis of the disease at advanced stages. Our lung cancer screening program is finding this form of cancer earlier for those who qualify for screening. Several educational presentations have been given in the community to provide the public with information about this important screening.

Since the beginning of our lung cancer screening program, patients at high risk for lung cancer are being diagnosed earlier, when it’s more treatable. Patients without insurance find it difficult, however, to pay for the much-needed screening. Vidant Health was honored to receive funding from the Lung Cancer Initiative of North Carolina. This funding provided screening for lung cancer to nine individuals who would not be able to afford it otherwise. Efforts continue to identify underserved patients in need of screening.

**Biden Summit**

On September 21, Vidant Cancer Care hosted one of over 450 cancer summits throughout the United States. These summits, as part of the Biden Cancer Initiative, were held in an effort to bring groups together to focus on actionable items in the fight against cancer. Our summit included audience discussion related to harnessing innovation as well as the future of survivorship. It ended with a live-stream from former Vice President Joe Biden on “Ending Cancer as We Know It.” By way of our conference room technologies, we were able to broadcast throughout the center and to regional hospitals.

**VMC community benefit**

Community benefit is designed to promote the health of a population broad enough to assist the community as a whole. Community benefit as a program or activity that responds to a demonstrated health-related community need and seeks to achieve at least one of the four community benefit objectives: improve access to health services, enhance public health, advance knowledge or relieve government burden.

Our vision is centered around all aspects of prevention, early detection, treatment, research and survivorship for persons with cancer, with a multidisciplinary approach to comprehensive care across the continuum. These words have deep significance and provide a framework for service to our community.

We take a proactive approach to health care through involvement in various community service events. During the past year, we provided 1,342.68 hours of community services.

Community benefit activities include support group meetings, cancer screenings, awareness presentations, resource fairs and clinics, health symposiums, complementary therapies, survivorship programs and dinner-and-learn health information sessions. This information is detailed in various sections of our report. For our staff, the ultimate reward comes from the participants’ expressions of appreciation for the services and information they received.

**Support services**

Vidant Health is excited to share that our hospitals located throughout eastern North Carolina are expanding their biopsychosocial-spiritual opportunities for health and healing. Each location is inspiring holistic wellness in a way that is unique to their community and patient population. As a healthcare organization, we strive to elevate the mind, body and spirit approach to care. With additional goals on the horizon, patients will find that our Integrative Oncology service line is making further plans to demystify what it means to receive exceptional care. Below is the comprehensive program outline at Vidant Medical Center, including regional and community partnership offerings. If you or someone you know would like further information about these services, please contact Jenny Higgins, MSW, LCSW, OSW-C at 252-714-3905.

*Support services*

*Vidant Health is excited to share that our hospitals located throughout eastern North Carolina are expanding their biopsychosocial-spiritual opportunities for health and healing. Each location is inspiring holistic wellness in a way that is unique to their community and patient population. As a healthcare organization, we strive to elevate the mind, body and spirit approach to care. With additional goals on the horizon, patients will find that our Integrative Oncology service line is making further plans to demystify what it means to receive exceptional care. Below is the comprehensive program outline at Vidant Medical Center, including regional and community partnership offerings. If you or someone you know would like further information about these services, please contact Jenny Higgins, MSW, LCSW, OSW-C at 252-714-3905.*
Support services continued

Psychotherapy
Vidant Cancer Care specializes in offering individual and family psychotherapy to our oncology patients and their loved ones. This modality supports the feelings, thoughts and concerns of cancer survivors and caregivers and their specific emotional and psychological needs. In addition to various supportive approaches and perspectives used in oncology mental health, we proudly offer Meaning Centered Psychotherapy (MCP). This form of therapy takes the survivor through an exploration of various sources of meaning and inspires living one’s life to the very fullest, even during extremely difficult times such as advanced cancer.

Support groups
Support groups are a great way for cancer survivors and their caregiver who share commonalities with others to come together and receive insightful education, psychosocial support and helpful guidance in a positive setting. The following support groups are available to all cancer survivors and their caregivers.

Healing with Horses
Vidant Cancer Care, in partnership with Rocking Horse Ranch, offers 10- and 12-week therapeutic equine-assisted programs designed for adult cancer survivors. This therapy encourages the development of positive coping skills that can be applied to the daily stressors of having cancer through interactions and activities with horses. After each session, participants meet with a licensed and certified clinical oncology social worker and horse trainer to share experiences and support one another. For more information, call 252-714-3905.

Caring Conversations
Together, members learn more about the various aspects of what it means to have cancer, managing their care, and receiving support in an interactive setting. This group is open to all cancer survivors and their family members or caregivers. They meet on the second Tuesday of each month from 5:00 pm to 6:30 pm at the McConnell-Raab Hope Lodge. For more information, call 252-816-2743.

Making It
A support group for patients with breast cancer that meets at 5:30 pm on the second Monday of each month. For more information, call 252-341-0917.

Connecting Caregivers
This support group allows caregivers the opportunity to explore shared experiences and concerns that are unique to caring for someone who is chronically or terminally ill. Together, we navigate through caregiving effectively through supportive discussion, therapeutic activities and the use of positive coping strategies and skill building techniques. For more information, call 252-714-3905.

Thriving and Surviving: A Support Group for Young Adults
The needs of young adults vary from other populations. This group is designed to focus on specific matters pertaining to cancer in early adulthood. Some topics that most young adults have in common include intimate and social relationships, managing a career and education, appearance, physical limitations and other shared experiences. For more information, call 252-714-3905.

Complementary therapies
In addition to support groups, many of our VCC programs offer or incorporate a variety of free complementary therapies for individuals who have been diagnosed with cancer and their caregiver. These programs are designed to assist in the healing process. Complementary therapies focus on improving physical, emotional, social and spiritual health and well-being throughout one’s cancer journey in conjunction with their medical care. Many of these complementary services are offered in the new cancer tower for current patients while undergoing therapy, or post therapy for a period of time. For information, call 252-714-3905.

Yoga
Yoga is a philosophy and discipline that incorporates breathing, meditation and restorative body postures to create relaxation, build endurance and increase flexibility. This practice is not a religion, but can be utilized as a time for prayer, tranquility or to bring about greater self-awareness. Yoga has been seen by many as a tool to promote a greater sense of well-being.

Meditation
A useful mental exercise to decompress and calm the mind. This relaxing action is a helpful tool to decrease anxiety. Meditation can help us redirect our negative thought processes so we can focus on living in the moment.

Art
Through various artistic mediums, patients and their caregivers can begin to cope through creativity and expression. In our art program, there are many different opportunities for self-exploration and expression.

Massage therapy
Massage involves the manipulation of muscles and soft tissues to enhance the functionality of the tissue and promote relaxation. Massage can decrease stress, anxiety, depression, and pain.

Reiki
A stress reduction and relaxation technique involving energy, designed to relieve symptoms.

Aromatherapy
The use of therapeutic grade essential oils to promote general well-being. Aromatherapy may also be used with other complementary therapies.

Animal-assisted therapy
Animals have a unique ability to lift our spirits and help us heal during times of sickness. With cooperation from the Delta Society, we are able to offer this therapy to patients and their families on a weekly basis. It allows patients and families the opportunity to enjoy unconditional love from a specially trained canine.
Survivorship 101: Exercise and Nutrition

Research validates that exercise can improve one’s mood, combat chronic diseases, manage weight, boost energy, and promote better sleep. Most cancer survivors are looking for ways to stay healthy following their diagnosis and treatment with the goal of increasing stamina and preventing the recurrence of cancer. With this in mind, we continue to partner with Vidant Wellness Center for Survivorship 101: Exercise and Nutrition Program. This 12-week program gives survivors an opportunity to be a member of the wellness center, receive 36 group personal training sessions, and attend two nutrition classes with a registered dietitian. For more information, call 252-714-3905.

Music therapy
A partnership with ECU School of Music Therapy, this program invites both inpatient and outpatient cancer survivors to enjoy the therapeutic benefits of a wide variety of techniques and instruments used to promote wellness through music.

Outpatient small group exercise
Introductory level exercise that creates fellowship with other cancer survivors while enjoying the benefits of exercise tailored to patients’ needs.

Inpatient exercise
Personal trainer led movement and exercise tailored to meet the needs of patients who are hospitalized.

Tai Chi
An ancient form of martial arts that uses slow fluid movements that are linked with the breath. This form of exercise has also been known to decrease stress and improve focus while improving overall well-being.

Journaling
Instructor-led group sessions that explore journaling as a way to process emotions, relax and discover reasons to be more hopeful about the future.

Survivorship Celebration Days (Community Partnership Programs)
These monthly regional events promote happiness and help cancer survivors find the joy in living life to the fullest despite the multitude of difficulties they face. These events offer encouragement, hope and empowerment that inspire participants to be creative, connect with nature and develop meaningful relationships with others. For more information, call 252-714-3905.

We are immensely grateful to our community partners for helping us make these opportunities a reality. A true essence of giving is helping to provide others an opportunity to enhance their well-being. We want to thank our generous partners once again for being a part of this community and helping us touch the lives of adults with cancer.

Holiday food drive
For many years, our social workers and other team members have facilitated a project during the holidays to ensure that our patients in need have food for this special time of year. This year, bags were prepared for 75 cancer patients in need. The bags were donated by the Leukemia and Lymphoma Society.

Nutrition programs
There are supportive nutrition programs available to cancer survivors and caregivers throughout the year. These programs feature insightful information on how nutrition can provide additional support in one’s overall well-being. These programs are offered in a fun and non-judgmental setting that embraces empowerment and inspiration.

Highlights
Events in 2018

<table>
<thead>
<tr>
<th>Month</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>Warm Up to Wellness</td>
</tr>
<tr>
<td></td>
<td>Vidant Wellness Center</td>
</tr>
<tr>
<td>February</td>
<td>Kicking Cancer with Cuisine</td>
</tr>
<tr>
<td></td>
<td>Fresh Vibes, Scullery and Starlight Café</td>
</tr>
<tr>
<td>March</td>
<td>Painting for Positivity</td>
</tr>
<tr>
<td></td>
<td>Painted Peacock</td>
</tr>
<tr>
<td>April</td>
<td>Art and Soul</td>
</tr>
<tr>
<td></td>
<td>Lisa Jordan Faux and More, LLC.</td>
</tr>
<tr>
<td>May</td>
<td>Mindful Wellness Retreat</td>
</tr>
<tr>
<td></td>
<td>Vidant Edgecombe Hospital and St. Anne’s Chapel and Retreat Center</td>
</tr>
<tr>
<td></td>
<td>Kayaking for Life</td>
</tr>
<tr>
<td></td>
<td>Marion L. Shepard Cancer Center, Inner Banks Outfitters and Backwater Jack’s</td>
</tr>
<tr>
<td>June</td>
<td>National Cancer Survivors Day</td>
</tr>
<tr>
<td></td>
<td>Sylvan Heights Bird Park</td>
</tr>
<tr>
<td>July</td>
<td>Growing Gratitude</td>
</tr>
<tr>
<td></td>
<td>Plant and See Nursery</td>
</tr>
<tr>
<td>August</td>
<td>Zooming In On You</td>
</tr>
<tr>
<td></td>
<td>It’s A Zoo Life</td>
</tr>
<tr>
<td>September</td>
<td>Support Groupers</td>
</tr>
<tr>
<td></td>
<td>Captain Stacy Fishing Center</td>
</tr>
<tr>
<td>October</td>
<td>Fall on the Farm</td>
</tr>
<tr>
<td></td>
<td>Simply Natural Creamery</td>
</tr>
<tr>
<td>November</td>
<td>Fall Gardening</td>
</tr>
<tr>
<td></td>
<td>Plant and See Nursery</td>
</tr>
<tr>
<td></td>
<td>Lung Cancer Awareness Dinner</td>
</tr>
<tr>
<td></td>
<td>Pancreatic Cancer Awareness Dinner</td>
</tr>
<tr>
<td>December</td>
<td>Juice and Smoothie Making 101</td>
</tr>
<tr>
<td></td>
<td>Fresh Vibes</td>
</tr>
</tbody>
</table>
Cancer registry

A cancer registry is a data system for the collection, management, and analysis of data on persons with a cancer diagnosis. The Vidant Medical Center (VMC) cancer registry accesses more than 2,000 cases annually and the eight hospitals combined accession more than 3,000 cases. The top five cancer sites diagnosed and treated at Vidant Medical Center in 2017 were breast, lung, colorectal, prostate and kidney/renal/pelvis.

Vidant Health transition

In recent years, the cancer registry successfully transferred all of Vidant Health’s cancer registry services under one roof. The eight Vidant Health hospitals’ cancer registry data are now collected and reported from one registry. This streamlined reporting model aids efficient, quality data collection and reporting for Vidant Health.

The cancer registry team

The registry team consists of a supervisor and assistant supervisor, both credentialed as Certified Tumor Registrars (CTR), four oncology data abstractors, three of whom are also CTRs and one follow-up analyst. A CRT is a nationally certified data collection and management expert with the training and specialized skills to provide high quality data in all avenues of cancer statistics and research. They review, interpret and capture a complete summary of patient history, demographic, diagnosis, staging, treatment modality and follow-up information. They also provide a valuable service to hospital and public health professionals by determining needs of the community as pertains to resources for cancer prevention, diagnosis and treatment.

Data usage

Cancer registry data are used continuously throughout the year. More than 150 data requests were provided for research and outcome studies. Data for the studies include county based data, follow-up, and annual case load statistics. Hospital-specific case totals and other information were reported for Edgecombe, Outer Banks, Beaufort, and Roanoke-Chowan hospitals in the Vidant system. Treatment-related data requests such as the number of patients that received radiation and many breast cancer correlated study requests were fulfilled. Information was analyzed and reported for The Brody School of Medicine’s National Accredited Program for Breast Centers Survey (NAPBC). Cancer registry data are utilized to report standard compliance to the American College of Surgeons Commission on Cancer for accreditation purposes. Annually, the cancer registry reports to the National Cancer Data Base (NCDB) and monthly to the North Carolina Central Cancer Registry (NCCCR). This information is reported to the NCDB and used in the Cancer Program Practice Profile Reporting tool in order to monitor the facilities’ compliance with national treatment guidelines.

Rapid Quality Reporting System (RQRS)

The Vidant Medical Center accredited cancer program participates in the American College of Surgeons Commission on Cancer Rapid Quality Reporting System (RQRS). The objective of the RQRS is to promote and facilitate evidence-based cancer care at Commission on Cancer accredited programs. The RQRS serves to assess compliance with six national quality performance measures for breast and colon cancers. Participation in RQRS provides our cancer program with real-time clinical alerts for individual cases in which pending treatment has not been

2017 leading cancer sites

<table>
<thead>
<tr>
<th>Primary site</th>
<th>Vidant Medical Center</th>
<th>North Carolina</th>
<th>National</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cases</td>
<td>Percent</td>
<td>Cases</td>
</tr>
<tr>
<td>Breast</td>
<td>442</td>
<td>18.2</td>
<td>8,580</td>
</tr>
<tr>
<td>Lung</td>
<td>425</td>
<td>17.5</td>
<td>7,940</td>
</tr>
<tr>
<td>Prostate</td>
<td>126</td>
<td>5.2</td>
<td>3,250</td>
</tr>
<tr>
<td>Colorectal</td>
<td>182</td>
<td>7.5</td>
<td>4,290</td>
</tr>
<tr>
<td>Bladder</td>
<td>60</td>
<td>2.5</td>
<td>2,500</td>
</tr>
<tr>
<td>NH Lymphoma</td>
<td>65</td>
<td>2.7</td>
<td>2,180</td>
</tr>
<tr>
<td>Corpus uteri</td>
<td>88</td>
<td>3.6</td>
<td>890</td>
</tr>
<tr>
<td>Pancreas</td>
<td>88</td>
<td>3.6</td>
<td>1,350</td>
</tr>
<tr>
<td>Melanoma of skin</td>
<td>57</td>
<td>2.3</td>
<td>3,060</td>
</tr>
<tr>
<td>Leukemia</td>
<td>57</td>
<td>2.3</td>
<td>1,970</td>
</tr>
<tr>
<td>Cervix</td>
<td>15</td>
<td>0.6</td>
<td>400</td>
</tr>
<tr>
<td>All others</td>
<td>821</td>
<td>33.8</td>
<td>21,840</td>
</tr>
<tr>
<td>Total cases</td>
<td>2,426</td>
<td>100.0</td>
<td>58,250</td>
</tr>
</tbody>
</table>
reported to the system. These alerts have been developed to provide a warning system for cancer programs to prevent patients from slipping through the cracks. We use RQRS alerts to help ensure the utmost quality of care is provided to our patients.

**Education**
The Vidant Health cancer registry serves as eastern North Carolina’s host site for the North American Association of Central Cancer Registries (NAACCR) webinar series. On a monthly basis, a site-specific webinar geared toward educating cancer registrars on updates to abstracting, coding, treatment modalities, and statistics is offered at the Monroe Conference Center on Vidant Medical Center’s campus.

---

**Evidence-based outcome study**

**Study to Assess Compliance of National Comprehensive Cancer Network (NCCN) Diagnostic and Treatment Guidelines for Neoadjuvant Chemotherapy in Muscle Invasive Bladder Cancer**

**Author**
Vijay Chaudhary, MD

**Presented by**
Vijay Chaudhary, MD

**Purpose**
To ensure compliance using NCCN guidelines for muscle invasive bladder cancer treatment with neoadjuvant chemotherapy plus cystectomy versus cystectomy alone.

**Source**
Vidant Medical Center Cancer Registry 2015-2017 bladder cancer cases

**Sample**
47 bladder cancer patients with stage T2, T3, or T4a

**Method**
Patient age, stage of disease were used to study treatment and survival. The NCCN guidelines were reviewed.

**Highlights over the course of the study**
- 17 percent of patients had neoadjuvant chemo plus cystectomy.
- 23 percent of patients were non-cystectomy candidates.
- 38 percent of patients had no neoadjuvant chemotherapy plus cystectomy.

**Recommendations**
- Patients with muscle invasive bladder cancer should be offered a consult with medical oncology; for patients considering radical cystectomy to discuss neoadjuvant chemotherapy considering survival benefit.
- Neoadjuvant chemotherapy with cisplatin based regimens to be considered a standard of care for such patients receiving care at VMC and at all regional sites.
- Multidisciplinary discussion to formulate a plan of care among urology/urologic oncologists, radiation oncology and medical oncology.

---

**Quality studies**

**The Impact of the Symptom Management Clinic on Improving Access to Cancer Care and Decreasing Emergency Department (ED) Visits and Readmissions**

**Author**
Leighann Henley, RN, MSN

**Presented by**
Leighann Henley

**Purpose**
Proper utilization of the Symptom Management Clinic (SMC) is needed to improve access to cancer care and decrease ED visits and readmissions.

**Method**
Utilize advance practice provider documentation and patient questionnaires to evaluate data from July 2017 until March 2018 to determine diagnosis, reason for visit and discharge disposition.

**Conclusions**
The clinic began in July 2017 operating 3 days/week during the afternoons. During that time, a total of 84 patients were seen in the SMC (dates July 2017 to March 2018). Data revealed that 66 patients (78 percent) would have visited the ED if the clinic was not available. 63 patients (75 percent) were treated and discharged home while 21 patients (25 percent) were admitted to the hospital. The most common diagnoses were lung, pancreatic and breast cancers. The most common procedures were intravenous fluids and nausea medications. The top physician users were Drs. Walker, Navaid and Muzaffar. The most common complaints were fever, dehydration, diarrhea and nausea/vomiting.

**Recommendations**
- Expand hours of SMC to support more patients.
- Bring patients in for multiple days if needed for treatment and assure adequate staffing of SMC to support growing volume.
- Continue to monitor cases presenting to SMC to evaluate volume of patients served.
- Track possible avoidances in ED and hospital visits.
Reduction in Time to First Antibiotics in Neutropenic Patients

Authors
Evelina Kolychev, PharmD, BCOP; Darla Liles, MD; Chelsea Passwater, MSN, RN, AGCNS-BC, OCN

Presented by
Evelina Kolychev, Darla Liles, Chelsea Passwater

Purpose
There is a delay in antibiotic administration for cancer patients with a diagnosis of Febrile Neutropenia (FN). Antibiotics are not being administered within the time constraints as recommended by national guidelines. Our goal was to determine what the percentage of the studied patient population that received effective antibiotics within one hour of FN diagnosis.

Method
A retrospective analysis performed in the Department of Pharmacy from July 1, 2014 to June 30, 2016. Reviewed patients 18 to 88 years old diagnosed with FN (modified to an absolute neutrophil count (ANC) < 500/mm³ and a single oral temperature ≥ 38.3°C or ≥ 38.0°C sustained for over one hour).

Findings
Data were collected for every patient admission during the studied time frame. 60 patients (N) resulted in 70 encounters (n). Study revealed that antibiotics were administered within one hour of fever 11.4 percent of the time in our neutropenic population. Frequently, the Gram Positive was administered first instead of Gram Negative. At the time of study, average time from order to administration of antibiotics was 130.41 minutes. There are 3 main environments where our neutropenic patients were assessed with fever: 4-CC Medical Oncology Inpatient, VMC Infusion and the ED.

Recommendations
• Develop a "fever card" for patients who present to ED after clinic hours.
• Include neutropenic orders in the admission order set for the hospitalist team.
• Continued education for hospitalist and hematology/oncology team on proper use of order sets and neutropenia/management.
• Develop a BEACON neutropenic fever order set that can be placed as a supportive care plan.
• Encourage rapid recognition and treatment of febrile neutropenia in the Symptom Management Clinic.

Fundraising
Cancer is the leading cause of death in eastern North Carolina. In our 29-county region, we serve 1.4 million residents. There are 19 individuals diagnosed with cancer every day, and eight of our residents pass away each day.

Vidant Health is on a mission-critical journey to change all of that – to transform cancer care in our region by preventing the incidence of cancer whenever possible, diagnosing the disease in its earliest stages and ensuring every patient with cancer receives world-class care without having to leave the area.

More than 3,500 donors have contributed over $43 million for Vidant Cancer Care at the Eddie and Jo Allison Smith Tower. The fundraising goal is $50 million for the new facility and for much-needed programs and services in Greenville and throughout the region.

For more information visit VidantHealthFoundation.com to learn how you can support our campaign. Or contact Varessa Wall at (252) 847-8994 or Varessa.Wall@VidantHealth.com.
New cancer center and bed tower

January through March saw much excitement and movement in the new cancer center and bed tower as equipment and furniture were placed, along with many team members going through orientation. The week of March 12 provided the opportunity for team member, provider and public open houses, a donor reception, ribbon cutting and tours. The cancer tower, named in honor of Eddie and Jo Allison Smith, opened to inpatients on March 25 and outpatients on March 26. This 418,000 square foot six-story facility houses inpatient and outpatient cancer services conveniently in one location. When one enters the lobby, music can be heard from the grand piano. Many individuals take the time to share their love of music and sometimes you may see a small group around the piano joined in song. In addition to this, the facility features include:

- **96 inpatient rooms**
- **Advanced radiology services**
- **Resource room, including space for complementary therapies**
- **Outdoor healing gardens for patients, caregivers and staff**
- **Pharmacy**
- **Image renewal boutique with wigs, scarves, hair products and post-mastectomy items**
- **60 infusion areas with views of the outdoor healing gardens**
- **Laboratory**
- **Conference space for cancer awareness and support programs**
- **58 specialty clinic rooms**
- **Labyrinths and walking paths for meditation and reflection**
- **Resource room, including space for complementary therapies**
- **Digital art screens**
- **Conference space for cancer awareness and support programs**
- **Five radiation therapy suites**
- **Resource room, including space for complementary therapies**

Additional features include the Retail Pharmacy, where patients can get prescriptions and medications immediately following an appointment or discharge, and the Hope and Caring Boutique, which provides specialty items for patients and families. Items for sale include cancer awareness merchandise, sun protection wear, inspirational materials, education, skincare products, robes, nutritional supplements, journals and cards.

*Photos of the new Eddie and Jo Allison Smith Tower, the new home to cancer care in Greenville, North Carolina*