Ballad Health Cancer Care 2020 Annual Report

January-December 2020

BalladHealth™

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Mission, Vision & Values

Our mission

Honor those we serve by delivering the best possible care

Our vision

To build a legacy of superior health by listening to and caring for those we serve

Our values

Creativity
We seek to discover and promote innovative ideas and the unique talents of each team member to bring value to our community.

Caring
We listen with empathy and appreciation and respond with kindness and compassion.

Honesty
We own our actions and practice the highest ethical standards with transparency and fair behaviors.

Respect
We appreciate the strengths of our community and practice true collaboration and skilled communication in everything we do.

Faith
We nurture the mind, body and spirit of each individual to inspire hope and improve the health and well-being of our community.

Quality
We work as a team to bring best practices, advanced technology, and experiences to provide the highest-quality care. We devote ourselves to continuous improvement, service excellence, and a zero-harm environment.

Program distinction

Oncology Care Model (OCM): Ballad Health Recognized as a High Performer

The Oncology Care Model (OCM) is a voluntary, five-year Medicare cost-savings initiative. Ballad Health physician practices that administer chemotherapy to fee-for-service (FFS) Medicare beneficiaries are eligible. The model focuses on the total cost of care for cancer patients undergoing chemotherapy during a six-month episode of treatment and ties payments to performance based on meeting certain quality metrics and practice transformation requirements. Ballad Health physician practices are continuously recognized as high performers.

Population Health and Bundled Payment National Meeting Awards in OCM

Ballad Health was recognized as a 2020 Award Winner!
Positive Savings and Excellent Quality in OCM Performance Period 4 and 5
Most Improved in OCM Performance Period 5

Positive Savings and Excellent Quality in OCM PP4 and PP5

BalladHealth™
Regional Cancer Center

Most Improved in OCM PP5 versus PP4

BalladHealth™
Regional Cancer Center
Wellmont Medical Associates

Program accreditation

The Ballad Health Oncology program is accredited by both the American College of Surgeons, Commission on Cancer (CoC) & and American College of Radiology (ACR).

Commission on Cancer

ACR American College of Radiology — American College of Radiology Breast Imaging Center of Excellence

Letter from our Vice President of Oncology Services

Tony Dotson

Cancer care is an extremely vital service that Ballad Health provides to patients across the Appalachian Highlands region, and I am honored to lead such a prestigious program.

As part of my role as vice president of Ballad Health's oncology services, I work with physicians and caregivers across the health system to ensure we deliver cancer care that meets the highest quality standards and achieves maximum value for our patients and their families.

I joined Ballad Health in November 2019, and not long after my arrival, I quickly realized that our cancer centers are filled with team members who genuinely care about their patients and are eager to help patients fight back against cancer. Seeing their compassion and dedication reassured me that I had joined a health system that puts patients above all else.

In early 2020, I began working with Ballad Health's oncology leadership team on an endeavor to accredit all of Ballad Health's cancer centers under one program through the American College of Surgeons' Commission on Cancer. Gaining this accreditation will foster multidisciplinary collaboration among caregivers, but most importantly, this effort will facilitate improvements to safety, quality and outcomes throughout our health system, ensuring our cancer patients receive the best possible care.

Of course, just as we started this initiative, healthcare across the nation changed due to the coronavirus disease 2019 (COVID-19) pandemic. Not only did the pandemic delay our accreditation process, it completely upended the way healthcare is delivered across the nation.

During the pandemic, while many elective healthcare services were completely halted or reduced, our cancer centers at Ballad Health remained fully operational. Cancer patients across the region still received the same quality care from our cancer center team members, who made sure the needs of our patients remained our top priority.

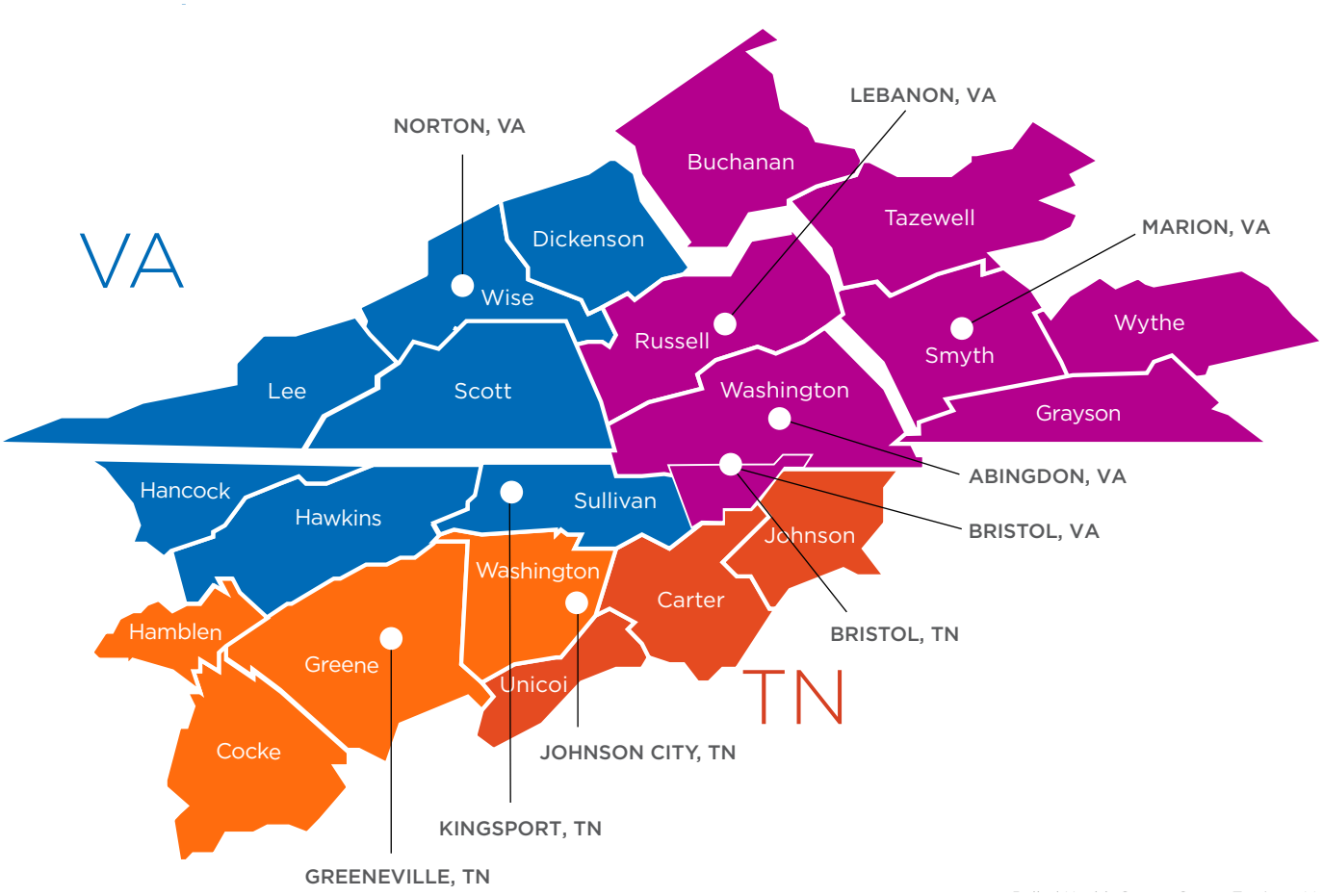
Our team members' dedication to selflessly serving our patients during 2020 confirmed the respect and admiration I have for them, and as I reflect back on this past year, it makes me extremely proud to work for Ballad Health and lead its cancer care program.

Whether its during a pandemic or not, our patients will never be alone in their fight against cancer.

Tony Dotson, FACHE
Vice President of Oncology Services
Ballad Health

Cancer centers and practices

Service map



Ballad Health Cancer Center Territory Map - Updated January 2021

REGIONAL TERRITORIES

- Southeast
- Northwest
- Southwest
- Northeast

Oncology services

Quick reference guide

Tennessee

Bristol

Oncology
Tamara Musgrave, MD
Ryan Shao, MD
Kelley Mayden, FNP
Kathy Sharp, FNP
Kim Nichols, NP

Radiation Oncology
John Fincher, MD
Matthew Gestout, MD

Greeneville

Oncology
Dharmen Patel, MD
Anil Tumker, MD

Radiation Oncology
John Boys, MD

Johnson City

Oncology
Kanishka Chakraborty, MD
Devapiran Jaishankar, MD
Koyamangalath Krishnan, MD
Sakshi Singal, MD
Elnora Spradling, MD
Jamie Carnell, NP
Julia Davenport, FNP
Ruth Johnson, FNP

Radiation Oncology
Kyle Colvett, MD
Nathan Floyd, MD

Kingsport

Oncology
Marcus DaSilva, MD
Paul Kramer, MD
Jamal Maatouk, MD
Ibrahim Nakhoul, MD
Asheesh Shipstone, MD
Yonette Paul, MD
Whitney Maden, FNP
Jessie Begley, NP
Kevin Blake, NP
Shirley Davis, NP
Alicia Deirth, NP
Sarah Falconer, PA
Paige Goforth, PA
Mistie Hagaman, NP
Tracy Romans, NP
Miranda Thomas, NP
Wendy Vogel, NP

Radiation Oncology
Scott Coen, MD
Rachael Carter, NP

Virginia

Abingdon

Oncology
T. Mark Davis, MD
Ahmad Hammad, MD
Kenneth More, MD
Ashley Jenkins, FNP
Whitney Fullen, NP
Lydia Novruzov, PA

Radiation Oncology
Bernie Tisdale, MD

Bristol

Oncology
Tamara Musgrave, MD
Ryan Shao, MD
Kelley Mayden, FNP
Kathy Sharp, FNP
Kim Nichols, NP

Radiation Oncology
John Fincher, MD
Matthew Gestout, MD

Lebanon

Oncology
Kenneth More, MD
Cathy Hopkins, PA

Marion

Oncology
Ahmad Hammad, MD
Jessica Hill, NP

Norton

Oncology
Nicholas Cook, MD
Harish Madala, MD
April Wallace, NP

Radiation Oncology
Scott Coen, MD
Rachael Carter, NP

Multidisciplinary Cancer Case Conference

Ballad Health Cancer Care (BHCC) is committed to delivering high quality, comprehensive cancer care. The primary method used to accomplish this is through multi-disciplinary treatment conferences. Each week all primary specialties comprising cancer treatment (Medical Oncologists, Radiation Oncologists, Surgeons, Pathologists and Radiologists) come together in a conference format to discuss the best and most appropriate treatment options tailored to each patient based on National Comprehensive Cancer Network (NCCN) cancer treatment guidelines. The team of physicians and ancillary caregivers, which includes research, dietitians, genetics, rehab, nurse navigators and social workers, openly discuss the needs and best options for patients. The plan of care is deployed with input from all stakeholders. The table below reflects all the cancer treatment conferences that take place at Ballad Health facilities.

Facility	Conference type	Frequency	Location	Time	Physician champion
Bristol Regional Medical Center	Breast	Every other Tuesday	Azalea Room	7:30 a.m.	Morgan
	Lung	Every Friday	Azalea Room	Noon	Messerschmidt
	Cancer	Every Friday	Azalea Room	12:30 p.m.	Gestaut
Johnston Memorial Hospital	Cancer	Second Tuesday of each month	Johnston Memorial Hospital Cancer Care Conference Room	Noon	More
Holston Valley Medical Center	Breast	Every Tuesday	Heritage Room	Noon	Ehrenfried
	Lung	Every Wednesday	Heritage Room	Noon	Greenfield
	GI	Every Tuesday	Heritage Room	12:30 p.m.	Ehrenfried
	ENT	Every Tuesday	Heritage Room	12:30 p.m.	Osterhaus
Lonesome Pine Hospital (Southwest Virginia Cancer Center)	VC with Holston Valley Medical Center		Remote into Holston Valley Medical Center		Above
Johnson City Medical Center	Cancer	Second and fourth Monday of the month	Tennessee Room	Noon	Colvett
	Neuro	First Friday of the month	Radiation Oncology Conference Room at Johnson City Medical Center	Noon	Schweitzer
	Melanoma	Third Wednesday of every month	TBD	7 a.m.	Lawson
Greeneville Community Hospital	Cancer	Monthly	Greeneville Community Hospital East Conference Room	Noon	Boys

Colon cancer site study 2020

Harish Madala, MD; Tamara Musgrave, MD; Kelley Mayden, NP

Harish Madala, MD

Tamara Musgrave, MD

Kelley Mayden, NP

Excluding skin cancer, colon cancer is the third most frequently diagnosed cancer and the second leading cause of cancer mortality in the United States (American Cancer Society [ACS], 2020). The death rate from colon cancer has been declining for several decades (Siegel, et al., 2020). Reasons for the decline include improved screening efforts, cancer detection in earlier stages and precision medicine. More than half of all deaths are attributable to modifiable risk factors such as excess alcohol use, physical inactivity, obesity and smoking. Persons with type 2 diabetes are at increased risk for colon cancer. A third of patients diagnosed with colon cancer have a family history of the disease, highlighting the importance of familial identification and genetic counseling (ACS, 2020). Cancer stage at diagnosis is predictive of survival, with five-year survival rates declining as cancer progresses from local to regional and distance spread. Patients diagnosed with metastatic colon cancer have a five-year survival rate of 14.2% (Weinberg, et al., 2020). Treatment for metastatic patients is palliative and incorporates quality of life, advanced care planning and appropriate pain management.

Management approaches for colon cancer include surgery and systemic therapy. Surgical resection with curative intent is the standard of care for non-metastatic colon cancer. Improved surgical lymph node harvest is associated with a survival benefit, 12 lymph nodes being the current harvest standard (Commission on Cancer [CoC], 2019). The American College of Surgeons (ACS) CoC supports this standard as well as synoptic reporting on pathology reports. Systemic therapy has been refined and incorporates tumor sidedness and individual molecular blueprints. Guidelines from the National Comprehensive Cancer Network (NCCN) (2020) incorporate both in recommending the national evidence-based guidelines for therapy. An important part of the colon cancer molecular profile is the identification for mismatch repair (MMR) by immunohistochemistry. This is an expected pathology standard and drives therapy decisions and genetic referrals.

Organizations committed to providing high-quality, evidence-based, cost-effect care (value-based care) must survey institutional practices and compare institutional findings to nationally-adopted benchmarks. The purpose of this site study is to compare and benchmark cancer care practices throughout the Ballad Health network as a means for promoting best practices and identifying opportunities for growth, improvement and education at the organizational, community and population levels. The aims of this study include the following and pertain to patients with colon cancer treated by Ballad Health Cancer Care specialists:

- Review of adherence to the NCCN guidelines in treating colon cancer
- Examine the rate of appropriate surgical lymph node harvest (12 nodes)
- Document the rate of synoptic reporting on colon cancer pathology reports
- Identify the most common risk factors for colon cancer across the network
- Determine the frequency of MMR testing among colon cancer patients
- Correlate the percentage of appropriate genetic referrals to the number of secure referrals
- Review the percentage of palliative care referrals for patients with stage IV colon cancer
- Review the percentage of advanced directives for patients with stage IV colon cancer
- Identify factors contributing to late presentation in stage III and IV colon cancer

Inclusion criteria

- Patients age ≥ 18 years with a diagnosis of colon cancer
- Patient received treatment at Ballad Health Cancer Care
- Patients with stage III and IV colon cancer

Exclusion criteria

- Patients age < 18 years
- Treatment was not received at a Ballad Health facility
- Patients diagnosed with rectal cancer

Methods

Patients diagnosed with colon cancer during 2016 and 2017 across the Ballad Health network were identified using the cancer registry. Charts were reviewed through the use of the EPIC electronic health record (EHR). Patients were categorized according to the stage, age and location. Synoptic reporting, lymph node harvest and the presence or absence of MMR

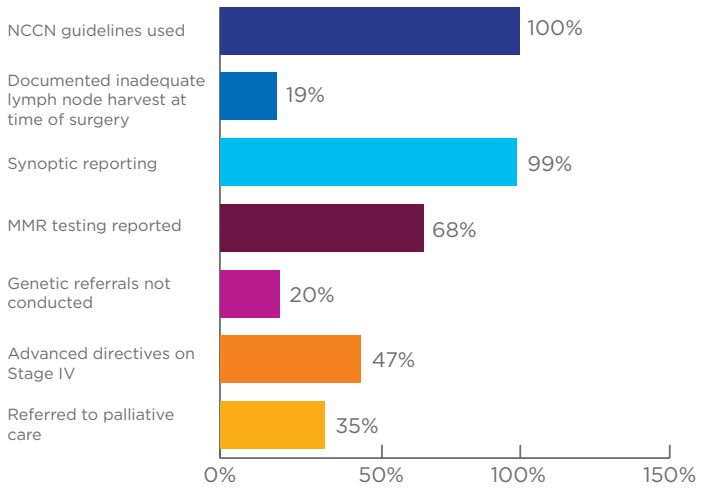
Colon cancer site study 2020

immunohistochemical evaluation were determined by a review of pathology and operative reports. The media section of the EHR was also reviewed for MMR testing results reported separately from the initial pathology. Risk factors (alcohol use, inflammatory bowel disease, diabetes, obesity, smoking) and factors contributing to a late presentation were isolated from initial consult notes, patient history and physicals, outside history and physicals, and the history section of the EHR. Referrals for genetic counseling and palliative care were determined by examining the notes, referral, media and advanced directives sections of the EHR. Treatment adherence to NCCN guidelines was based on a comparison of each patient's therapy to the NCCN guidelines for 2016 and 2017. Therapy plans were reviewed from provider notes, treatment and therapy plans, and the synopsis sections of the EHR.

Results

A retrospective chart review was conducted on a cohort (n=114) of patients selected from across the Ballad Health network. All patients in the cohort were treated in accordance with NCCN guidelines. Diagnostic biopsies (n=18) of oligometastatic areas, such as the liver, that would not yield lymph nodes were excluded in the assessment of adequate lymph node harvest. Of the remaining eligible charts, 18/96 (18.75%) documented inadequate lymph node harvest at the time of surgery. Synoptic reporting was identified on 113/114 (99%) of charts. MMR testing was reported in 77/114 (67.5%) of patients.

For total Stage III and IV colon cases reviewed



Risk factors common to the cohort were present as follows: alcohol use 11/114 (9.6%); IBD 2/114 (1.75%); diabetes 26/114 (22.8%); obesity 34/114 (29.8%); and smoking 60/114 (52.6%). Genetic referrals were indicated but not conducted in 23/114 (20.18%) of cases. For patients with stage IV disease, 24/51 (47.06%) had advanced directives completed or on file, and 18/51 (35.29%) of patients were referred to palliative care services. The most common factor contributing to late cancer presentation was delayed colonoscopy screenings (absence of baseline colonoscopy or delayed follow-up colonoscopy in those with known risk factors) occurring in 33/114 (28.95%) of cases.

Colon cancer incidence

Age group	Ballad Health	National Cancer Database
40-49	12.28%	7.37%
50-59	18.42%	18.23%
60-69	31.58%	25.33%

The average age at diagnosis was 64 years. As compared to averages available from the National Cancer Data Base through the ACS, Ballad Health had an above average colon cancer incidence in the following age groups: 40-49 years (12.28% vs. 7.37%); 50-59 years (18.42% vs. 18.23%); and 60-69 years (31.58% vs. 25.33%). The unadjusted death rate from stage III colon cancer was 14/63 (22.2%) and 36/51 (70.58%) from stage IV colon cancer.

Conclusion

Within the Ballad Health network, the treatment of colon cancer aligns with NCCN guidelines in 100% of cases. Surgical lymph node harvest is appropriate 81.25% of the time, this is just slightly under the 85% standard outlined by the CoC. Pathological synoptic reporting occurs in 99% of cases, this exceeds the CoC standard of 95%, as well as meets the standard of the College of American Pathologists. The NCCN recommends universal MMR testing in all newly-diagnosed colon cancer patients in CLIA-approved laboratories. The presence of testing in 67.5% of patients falls below this established standard. All Ballad Health laboratories are CLIA-certified.

Diabetes, obesity and smoking are the leading risk factors for the development of colon cancer among Ballad healthcare recipients. A predominating reason for late-stage III and IV colon cancer presentations is the absence of age-appropriate screening colonoscopies and delayed colonoscopies in those with previously identified risk factors. Diagnosis among those ages 40-69 years exceeds the national averages compared to all hospitals reporting to the National Cancer Data

Colon cancer site study 2020

Base. The rate of genetic referrals in appropriate cases does not meet the NCCN goal of referral for all patients identified at risk for genetic susceptibility to colon cancer. The low rates of advanced directive completion and referrals for stage IV cancer to palliative care are lower than the recommended referral rate of 100% by the NCCN for patients with metastatic solid tumors. The unadjusted death rates represent viable targets for improvement.

Benchmark comparison for late stage colon

Measure	Ballad Health	National Standard
Surgical lymph node harvesting	81.25%	85.00%
Synoptic reporting	99.00%	95.00%
MMR testing	67.50%	100.00%
Genetic referral	67.50%	100.00%
Advance directives	47.00%	100.00%
Palliative referral	35.00%	100.00%

Future implications

- Interprofessional education of network surgeons to assure adequate surgical lymph node yield
- Interprofessional education of pathologists to assure universal MMR testing on biopsy samples
- Interprofessional education of primary care providers about the importance of referral for age-appropriate screening colonoscopies
- Interprofessional education of primary care providers about appropriate query of risks for familial colon cancer and avenues for timely genetic referral
- Interprofessional collaboration with the genetic counseling service line to ensure newly diagnosed colon cancer patients are screened and appropriately tested for familial syndromes
- Interprofessional collaboration with the palliative care service line to increase the rate of referrals in stage IV colon cancer
- Interprofessional collaboration with population health to develop interventions that address diabetes, obesity and smoking throughout the Ballad Health network
- Interprofessional collaboration with population health to increase the rate of age-appropriate screening for colon cancer throughout the Ballad Health network

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- Weinberg, B. A., Armstrong, A. S., & Malley, R. (2020). Molecular profiling in metastatic colorectal cancer. Oncology, 34(9). https://www.cancernetwork.com/view/molecular-profiling-in-metastatic-colorectal cancer
- https://www.facs.org/Quality-Programs/Cancer/CoC/standards

Patient assistance fund

How was it spent?

Imagine undergoing cancer treatment; you're sick, scared and fighting for your life. Now imagine, in the middle of treatment, the financial toll has become so heavy you can no longer afford gas, electricity or car payments.

For too many people in our region, that's a frightening reality — which is why the cancer patient assistance fund, overseen by Ballad Health Foundation, is so important. Known as the Circle of Hope fund, it provides assistance for things like gas vouchers, taxi fare, non-covered medications, nutritional expenses, personal care items and electric bills. This fund exists to make things a little easier for patients in their time of need.

Patient assistance fund spend detail 2015-2020

	CY15	CY16	CY17	CY18	CY19	CY20
Mortgage/rent	6%	6%	9%	13%	11%	10%
Medications	18%	20%	18%	18%	15%	19%
Utilities	36%	43%	38%	41%	43%	23%
Gas cards	16%	21%	4%	5%	10%	30%
Food City cards	20%	9%	30%	17%	16%	9%
Other	4%	2%	2%	6%	6%	7%
Total	100%	100%	100%	100%	100%	100%

Average number of patients helped each month.

150

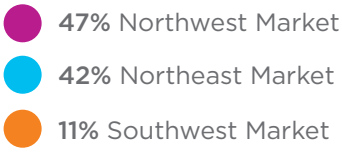
Average amount of money given out in total each month.

$15,600

Average amount of money each patient receives.

$102

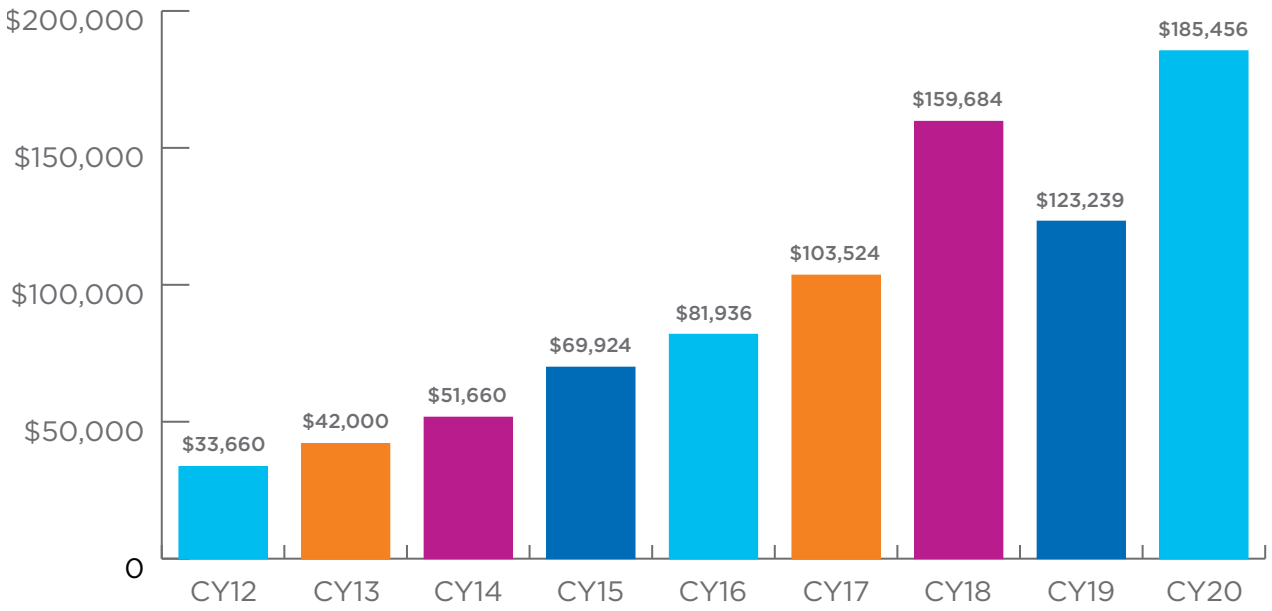
Assistance by location



Patient assistance fund

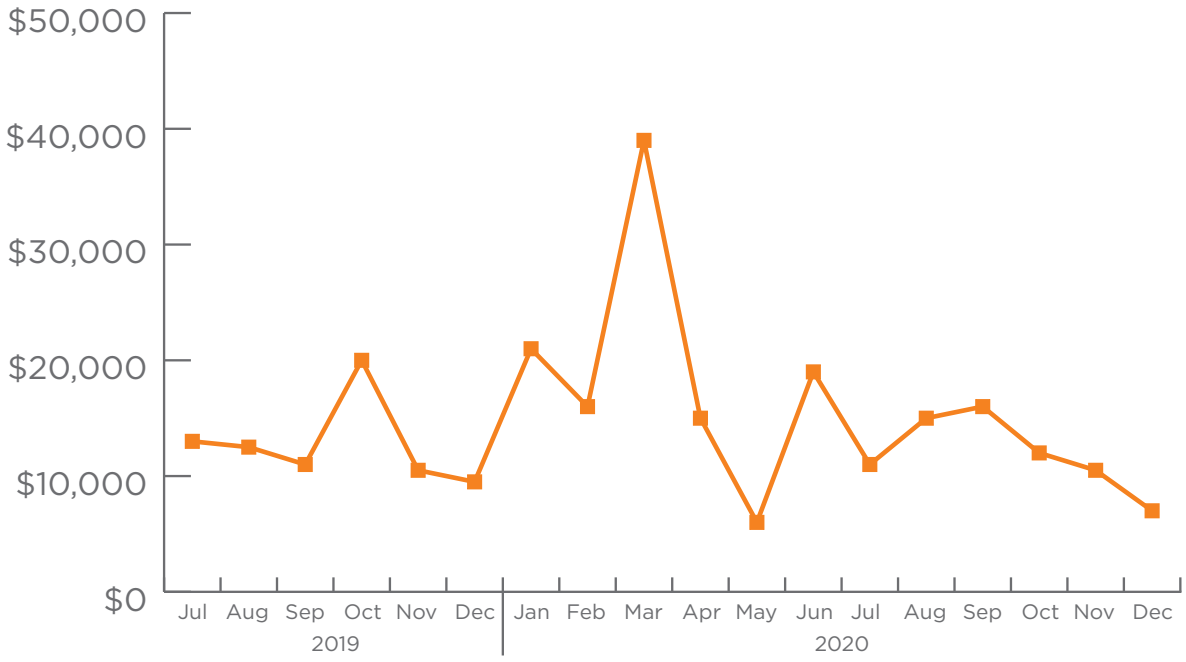
How was it spent?

Annual spend trend



Patient assistance funds

(Spend trend per month)



Oncology research program

Justin Reynolds

The Ballad Health Oncology Research program spans many offices in Kingsport, Bristol, Norton and Johnson City involving our oncologists/hematologists, radiation oncologists and surgical oncologists. Several of our physicians serve as principal investigators across our portfolio of research trials. Ballad Health partners with pharmaceutical companies, academic institutions and the National Cancer Institute to bring cutting-edge research to the Appalachian Highlands so that our patients can participate in clinical trials in their own communities.

While many of our clinical trials involve new treatments and therapy, we also participate in research that addresses cancer prevention and control, supportive care, symptom management and health disparities. With support from our corporate research department, we have a team of research staff that includes Jackie Pierson, Janet Mullins, Ruth Couch, RN, Anna Yakubenko, RN, and Justin Reynolds, BS, CCRP.

While COVID-19 has slowed research enrollments in 2020, we look forward to growing oncology clinical trials across our network in the near future.

Year of enrollment: CY19

Type of research study	Number of subjects consented and enrolled
Clinical trials	19
Diagnostic trials	0
Genetic studies	3
Prevention and control research studies	0
Quality of life and economics of care studies	44
Bio-respiratory/bio-bank studies	389
Patient registry studies	4
Other specified	0
Total	**459**
Percentage enrolled	**11%**

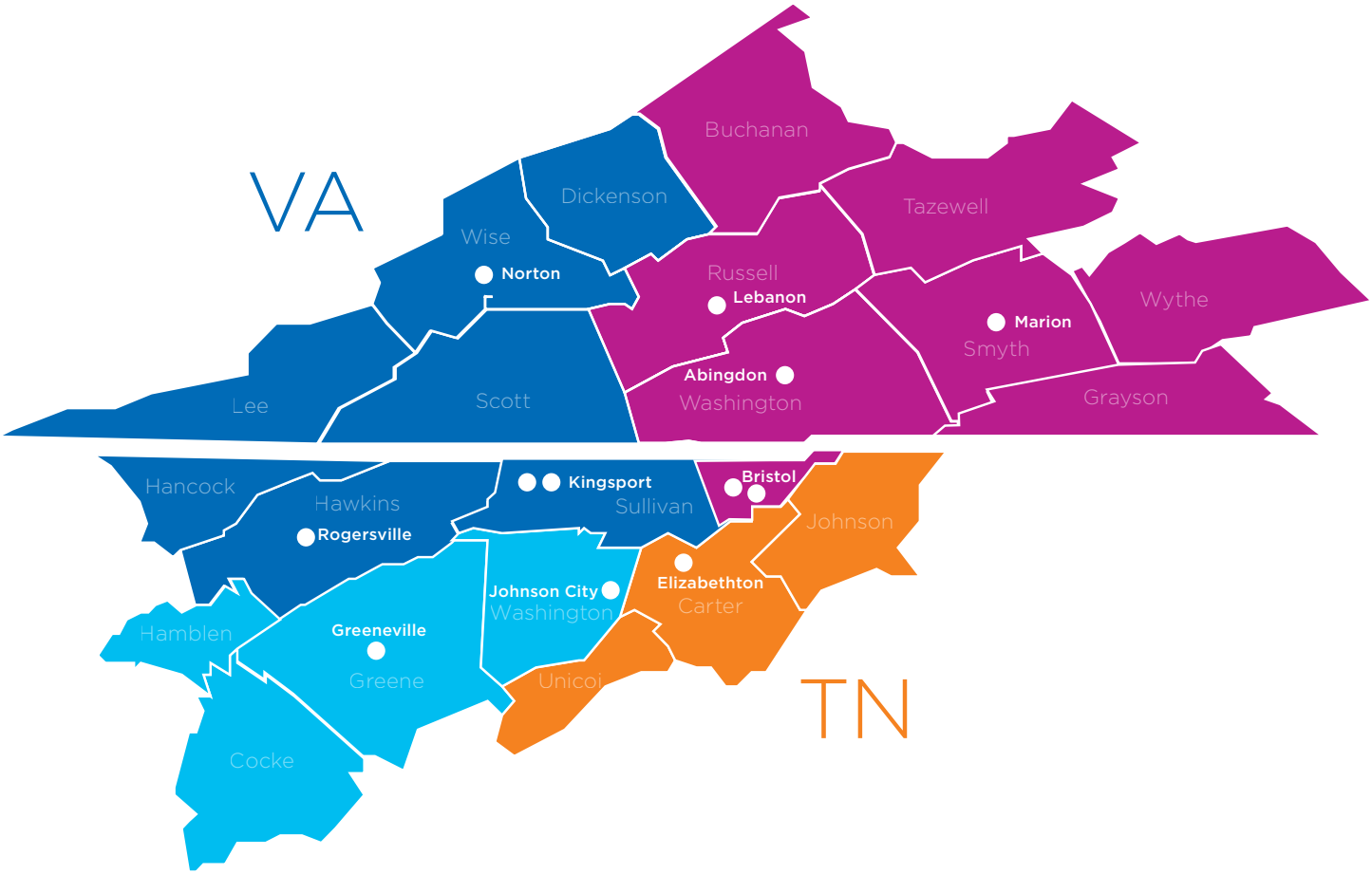
Year of enrollment: CY20 (through October)

Type of research study	Number of subjects consented and enrolled
Clinical trials	8
Diagnostic trials	0
Genetic studies	1
Prevention and control research studies	0
Quality of life and economics of care studies	11
Bio-respiratory/bio-bank studies	186
Patient registry studies	0
Other specified	0
Total	**206**
Percentage enrolled	**6%**

INCP standard = 6%

Breast imaging facilities

Ballad Health expanded the fight against breast cancer in 2020 throughout the Appalachian Highlands. Locations of breast imaging facilities are depicted in the service area map below. Ballad Health was able to perform 409 mobile breast cancer screenings compared to 341 screenings in 2019. Since the EPIC go live, our health system has completed 13,187 mammograms with 103 true positive exams. The EPIC electronic medical record allows us to evaluate the outcomes of our whole system.



13,187 breast cancer screenings
103 true positive exams

Breast cancer accountability report

Interpreting the report: The estimated performance rates shown below provide your cancer program with an estimate of the proportion of patients concordant with measure criteria by diagnosis year. If appropriate, the Commission on Cancer (COC) standard and benchmark compliance rate is provided. This application provides our cancer programs the opportunity to examine data to determine if performance rates are representative of the care provided at the institution and to review and modify case information using the review function for the measure of interest.

Bristol Regional Medical Center

Primary site	Measure	Measure description	COC goal	Ballad Health performance rates (%)		
				2015 Performance rate	2016 Performance rate	2017 Estimated performance rate
Breast	BCSRT	Radiation therapy is administered within one year (365 days) of diagnosis for women under age 70 receiving breast conserving surgery for breast cancer	PR/EPR 95% CI Benchmark	96.30% [89.17% – 100.00%] 90%	92.68% [84.71% – 100.00%] 90%	92.86% [85.07% – 100.00%] 90%
	HT	Tamoxifen or third generation aromatase inhibitor is recommended or administered within one year (365 days) of diagnosis for women with AJCC T1cN0M0, or stage IB - III hormone receptor-positive breast cancer	PR/EPR 95% CI Benchmark	87.93% [79.55% – 96.31%] 90%	94.92% [89.31% – 100.00%] 90%	87.50% [78.84% – 96.16%] 90%
	MASTRT	Radiation therapy is recommended or administered following any mastectomy within one year (365 days) of diagnosis of breast cancer for women with > 4 positive regional lymph nodes	PR/EPR 95% CI Benchmark	85.71% [59.79% – 100.00%] 90%	100.00% [100.00% – 100.00%] 90%	100.00% [100.00% – 100.00%] 90%
	nBx	Image or palpation-guided needle biopsy to the primary site is performed to establish diagnosis of breast cancer	PR/EPR 95% CI Benchmark	90.20% [84.43% – 95.97%] 80%	84.31% [77.26% – 91.37%] 80%	84.76% [77.89% – 91.64%] 80%

Breast cancer accountability report

Greeneville Community Hospital East

Primary site	Measure	Measure description	COC goal	Ballad Health performance rates (%)		
				2015 Performance rate	2016 Performance rate	2017 Estimated performance rate
Breast	BCSRT	Radiation therapy is administered within one year (365 days) of diagnosis for women under age 70 receiving breast conserving surgery for breast cancer	PR/EPR 95% CI Benchmark	90.91% [73.92% – 100.00%] 90%	100.00% [100.00% – 100.00%] 90%	95.00% [85.45% – 100.00%] 90%
	HT	Tamoxifen or third generation aromatase inhibitor is recommended or administered within one year (365 days) of diagnosis for women with AJCC T1cN0M0, or stage IB - III hormone receptor-positive breast cancer	PR/EPR 95% CI Benchmark	100.00% [100.00% – 100.00%] 90%	88.89% [74.37% – 100.00%] 90%	76.19% [57.97% – 94.41%] 90%
	MASTRT	Radiation therapy is recommended or administered following any mastectomy within one year (365 days) of diagnosis of breast cancer for women with > 4 positive regional lymph nodes	PR/EPR 95% CI Benchmark	100.00% [100.00% – 100.00%] 90%	100.00% [100.00% – 100.00%] 90%	Data not available
	nBx	Image or palpation-guided needle biopsy to the primary site is performed to establish diagnosis of breast cancer	PR/EPR 95% CI Benchmark	100.00% [100.00% – 100.00%] 80%	100.00% [100.00% – 100.00%] 80%	93.75% [85.36% – 100.00%] 80%

Breast cancer accountability report

Holston Valley Medical Center

Primary site	Measure	Measure description	COC goal	Ballad Health performance rates (%)		
				2015 Performance rate	2016 Performance rate	2017 Estimated performance rate
Breast	BCSRT	Radiation therapy is administered within one year (365 days) of diagnosis for women under age 70 receiving breast conserving surgery for breast cancer	PR/EPR 95% CI Benchmark	87.50% [76.04% – 98.96%] 90%	91.30% [83.16% – 99.45%] 90%	87.23% [77.69% – 96.77%] 90%
	HT	Tamoxifen or third generation aromatase inhibitor is recommended or administered within one year (365 days) of diagnosis for women with AJCC T1cN0M0, or stage IB - III hormone receptor-positive breast cancer	PR/EPR 95% CI Benchmark	91.25% [85.06% – 97.44%] 90%	94.87% [89.98% – 99.77%] 90%	92.63% [87.38% – 97.89%] 90%
	MASTRT	Radiation therapy is recommended or administered following any mastectomy within one year (365 days) of diagnosis of breast cancer for women with > 4 positive regional lymph nodes	PR/EPR 95% CI Benchmark	91.67% [76.03% – 100.00%] 90%	83.33% [53.51% – 100.00%] 90%	75.00% [44.99% – 100.00%] 90%
	nBx	Image or palpation-guided needle biopsy to the primary site is performed to establish diagnosis of breast cancer	PR/EPR 95% CI Benchmark	96.93% [94.29% – 99.58%] 80%	91.74% [86.83% – 96.64%] 80%	86.27% [80.82% – 91.73%] 80%

Breast cancer accountability report

Johnson City Medical Center

Primary site	Measure	Measure description	COC goal	Ballad Health performance rates (%)		
				2015 Performance rate	2016 Performance rate	2017 Estimated performance rate
Breast	BCSRT	Radiation therapy is administered within one year (365 days) of diagnosis for women under age 70 receiving breast conserving surgery for breast cancer	PR/EPR 95% CI Benchmark	100.00% [100.00% – 100.00%] 90%	83.72% [72.69% – 94.76%] 90%	94.92% [89.31% – 100.00%] 90%
	HT	Tamoxifen or third generation aromatase inhibitor is recommended or administered within one year (365 days) of diagnosis for women with AJCC T1cN0M0, or stage IB - III hormone receptor-positive breast cancer	PR/EPR 95% CI Benchmark	94.20% [88.69% – 99.72%] 90%	96.30% [91.26% – 100.00%] 90%	93.33% [87.69% – 98.98%] 90%
	MASTRT	Radiation therapy is recommended or administered following any mastectomy within one year (365 days) of diagnosis of breast cancer for women with > 4 positive regional lymph nodes	PR/EPR 95% CI Benchmark	100.00% [100.00% – 100.00%] 90%	75.00% [32.56% – 100.00%] 90%	100.00% [100.00% – 100.00%] 90%
	nBx	Image or palpation-guided needle biopsy to the primary site is performed to establish diagnosis of breast cancer	PR/EPR 95% CI Benchmark	98.35% [96.08% – 100.00%] 80%	98.13% [95.56% – 100.00%] 80%	97.39% [94.98% – 100.00%] 80%

Oncology navigator program

Our oncology navigators serve as a point of contact for cancer patients and their families throughout their cancer journey, from the time of diagnosis to end of life and survivorship.

The navigation program is divided into three units: community navigators/social workers, lung nodule navigators/coordinators and nurse navigators. All three units work hand-in-hand to ensure that patients flow through the complex healthcare system. The oncology navigators provide this service by answering questions about what to expect throughout care, assisting with coordination of appointments and treatments, and helping provide education and emotional support. In addition, the navigators help coordinate resources for treatment planning, nutritional counseling, financial support, transportation, community event and support groups.

One thing we are especially proud of is the way our navigators meet the needs of the patients, from follow-through of lung nodules for early detection to financial assistance for transportation, utilities and mortgage. When patients come back and tell us how much it meant that we helped them with their electric bill or took the time to meet with them after they received their diagnosis, that's our "why," and what makes us proud to do what we do.

The navigators are a shining example of how to coordinate care for patients across state lines and counties. Oftentimes we will have a patient receiving chemotherapy in one county and radiation in another, or surgery in one state and their treatment from their oncologist in another state. The navigators do an excellent job communicating to each other so the patient receives seamless care with effective communication to all involved, regardless of where they are in the system.

Like everyone else, we were impacted by COVID-19. As care moved to telehealth and support groups went virtual, we had to adapt and continue to meet the needs of patients in a unique manner. The navigators got very creative from leaving wigs on a bench in front of the hospital to directing patients to support groups through Zoom. In addition, the navigators increased their calls to patients for follow-up and to answer questions from family members who normally would've been able to attend an appointment, but couldn't due to COVID-19 visitor restrictions.

Overall, we are extremely proud of the navigation program at Ballad Health. The team has a passion to serve patients and their families with excellent care. Many team members have their own personal story of how cancer has affected them or someone they love. This often drives them to want to give their very best and go above and beyond for patients and their loved ones.

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