THE QUEEN’S MISSION
To fulfill the intent of Queen Emma and King Kamehameha IV to provide in perpetuity quality health care services to improve the well-being of Native Hawaiians and all of the people of Hawai‘i.

THE QUEEN’S VISION
To be the preeminent health care system of the Pacific, providing superior patient care that is continually advanced through education and research.

Through our stewardship and dedication, we embrace these values in our Philosophy of Care, Lokomaika‘i, or inner health.

We believe that all people will be cared for with dignity and respect in an environment which is sensitive to each person’s beliefs, values, and culture. Each team member, patient, and family is committed to a collaborative approach in providing an environment that will promote healing of mind, body, and spirit. Our philosophy is extended in a place of harmony as guided by the vision and ideals of our founders.

SHARED VALUES (C.A.R.E.)
Compassion guides our actions
Aloha inspires us in all that we do
Respect and understanding are essential for the dignity of all
Excellence is our quest

GUIDING PRINCIPLE
One team committed to the best patient C.A.R.E. for our community.

Our Shared Values and Guiding Principle are a set of beliefs and behaviors that honor the intent of our founders, Queen Emma and King Kamehameha IV, and guide the performance of our organization. Sustaining the royal vision is an ongoing cycle that began with our founders. Guided also by our mission and vision, The Queen’s Health System’s Board of Trustees and management use Ka ‘like Pono to align our efforts. Ka ‘like Pono (striving to perfect the vision) is a continuous process that integrates strategic, business, and financial planning. Our commitment to a mission-driven, performance-focused culture allows us to continuously improve, growing ever stronger as we strive to fulfill the extraordinary responsibility of sustaining the royal vision.

1859: The Queen’s Hospital founded by King Kamehameha IV & Queen Emma
1878: Oldest cancer case on record
1970: First oncology unit at Queen’s
1977: Comprehensive Cancer Care Program
1974: Accredited by the Commission on Cancer
1976: Oncology Unit Opens
1979: QMC/University of Hawai‘i Cancer Research Center collaboration
1981: 48-bed inpatient oncology unit opens
1994: Accredited by the American College of Radiology
1997: First in U.S. with 32-ring PET scanner; First PET in Hawai‘i
2001: MD Anderson Cancer Network® affiliation
2005: North Hawai‘i Community Hospital Cancer Center established
2006: Patient Navigation Program established
2007: National ACR National Accreditation for Breast Centers—first in Hawai‘i
2008: NCI Community Oncology Research Program (NCORP) subgrant; first Comprehensive Cancer Biorepository in Hawai‘i
2010: QMC selected by National Cancer Institute Cancer Centers Program
2013: Quality Oncology Practice Initiative Certification
2015: MD Anderson Cancer Network® Certified Member
2016: NCI Cancer Centers Program established for outpatients
TABLE OF CONTENTS

Preface .................................................................................................................................................. 1
Introduction ......................................................................................................................................... 2
Summary Of Oncology Data Registry Trends .................................................................................. 5
  Summary of 2016 Cases - The Queen's Medical Center ................................................................. 5
  Newly Diagnosed Cancer Cases Reported in the State of Hawaiʻi, 2012 - 2015 .............................. 7
  Classification of Newly Diagnosed Cases - 2012 - 2016, The Queen's Medical Center .............. 7
  Place of Residence at Diagnosis - 2016, The Queen's Medical Center ......................................... 8
  Age & Gender Distribution at Diagnosis - 2016, The Queen's Medical Center ............................. 8
  Top 10 Cancer Sites Reported at The Queen's Medical Center & the State of Hawaiʻi ................ 9
  5 Leading Cancer Sites by Gender, The Queen's Medical Center vs. the State of Hawaiʻi .......... 10
  Distribution by Ethnicity, The Queen's Medical Center vs. the State of Hawaiʻi ............................ 10
The Queen's Cancer Center ................................................................................................................ 11
  Multidisciplinary Care Clinics: A Team Approach to Cancer Care ............................................. 13
  Radiation Oncology ......................................................................................................................... 15
  Inpatient Oncology .......................................................................................................................... 18
  Patient Navigation Program ............................................................................................................ 19
  Cancer Survivorship Program ......................................................................................................... 20
  Queen's Head and Neck Institute .................................................................................................... 21
  Pain & Palliative Care ...................................................................................................................... 22
  Pharmacy Services ........................................................................................................................ 23
  Oncology Research Department ..................................................................................................... 24
  Queen's Pathology, Molecular Diagnostics Laboratory & Biorepository .................................... 26
  Hospital Ministry .............................................................................................................................. 27
  Comprehensive Genetics Center ...................................................................................................... 27
  Imaging Services .............................................................................................................................. 28
  Social Work Services ...................................................................................................................... 29
  Queen's Women's Health Center .................................................................................................... 30
  Community Outreach ...................................................................................................................... 32
  Food & Nutrition Services .............................................................................................................. 34
The Queen’s Medical Center Cancer Committee thanks the Queen’s Board of Trustees and Art Ushijima, President & CEO of The Queen’s Health Systems, for their unwavering support of our oncology program. While we are delighted to gain local and national accolades for our accomplishments, none of this would have been possible without the support of our leadership.

The process of taking this cancer program to the next level began many years ago when the Queen’s Board of Trustees approved the building of the Queen’s Cancer Center. This dream soon became reality, shaped by Mr. Ushijima’s desire to integrate the concepts of The Queen’s Health Systems’ five-year plan, Ka ‘Ike Pono (striving to perfect the vision), into the Queen’s Cancer Center.

QMC has established itself as the provider of choice for oncology patients in the State of Hawai’i. Additionally, QMC is the employer of choice for the majority of oncology nurses, health professionals, and support staff. In keeping with the request of the Board of Trustees, QMC has escalated its oncology research efforts and increased the number of oncology patients in the State of Hawai’i. Additionally, QMC has established itself as the provider of choice for oncology services, health professionals, and support staff.

The oncology service line and the Cancer Committee here-by expresses our most sincere appreciation to Mr. Ushijima and the Board of Trustees for believing in our dreams and providing the support needed to create this world-class oncology program.

Our philosophy is extended in a place of harmony as guided by our founders, King Kamehameha IV and Queen Emma. The Queen’s Medical Center embraces a hospital-wide philosophy of care called Lokomakoi, or “inner health.” The purpose of Lokomakoi is to create a healing environment that promotes and fosters partnerships with patients, their families, and health care teams throughout the organization. Another aspect of Lokomakoi is to build a values-based organization centered on compassion, aloha, respect, and excellence. The ultimate goal is to incorporate the vision and ideals of the Queen’s Mission and Vision with the latest medical practices and the healing of the mind, body, and spirit.

The oncology service line and the Cancer Committee hereby expresses our most sincere appreciation to Mr. Ushijima and the Board of Trustees for believing in our dreams and providing the support needed to create this world-class oncology program.
INTRODUCTION (CONTINUED)

In 2015, with the top four disease sites (breast, lung, and neck, and melanoma cases), we have 6 new surgeons who focus on complex head and neck cases. This continued face-to-face experience with MD Anderson physicians has allowed Queen’s practitioners to build an outstanding collegial relationship. Our MD Anderson Cancer Network certified physicians may also request expeditation program for cancer programs in the United States. Maintaining our CoC accreditation allows the Queen’s Cancer Center to be rated on comprehensive standards that guide treatment, ensuring the highest quality patient-centered cancer care. Our CoC program requires continuous reporting to benchmark performance and improve outcomes. In 2014, the Queen’s Cancer Center received the CoC’s Outstanding Achievement Award, which recognizes the exceptional level of cancer care provided to the community. Only 7% of CoC hospitals receive this award. The next re-accreditation survey will occur in Fall of 2017.

The Queen’s Cancer Center continues to maintain its accreditation with the American College of Surgeons Commission on Cancer (CoC), the only multidisciplinary accreditation program for cancer programs in the United States. To maintain certification, QMC oncology physicians must participate in peer reviews. This is an ongoing educational process with collegial interactions in a non-punitive setting in which our physicians are given a report from MD Anderson Physicians Network faculty with comments and feedback. There is no expectation that a physician will hold treatment or revise treatment plans for a patient based on recommendations from MD Anderson. These recommendations are made for educational purposes with the intent that the physician will incorporate recommendations into their practice as appropriate.

COMMISSION ON CANCER ACCREDITATION

The Queen’s Cancer Center continues to be fully accredited by the National Accreditation Program for Breast Centers (NAPBC), a coalition of professional organizations dedicated to providing the most efficient and current breast care using scientific evidence. The NAPBC board is comprised of leadership from many medical disciplines, and upholds nationally recognized quality performance measures for breast cancer treatment. Queen’s is the only hospital in Hawai‘i that has been accredited by the NAPBC. Queen’s is also designated as a Breast Imaging Center of Excellence by the American College of Radiology.
### SUMMARY OF 2016 CASES – THE QUEEN’S MEDICAL CENTER

#### PRIMARY SITE

<table>
<thead>
<tr>
<th>Primary Site</th>
<th>Total (%)</th>
<th>Sex</th>
<th>AJCC Stage Distribution at Time of Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ORAL CAVITY &amp; PHARYNX</strong></td>
<td>534 (2.1%)</td>
<td>M</td>
<td>F</td>
</tr>
<tr>
<td>Lip</td>
<td>4 (0.2%)</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Tongue</td>
<td>43 (1.8%)</td>
<td>25</td>
<td>20</td>
</tr>
<tr>
<td>Salivary Glands</td>
<td>10 (0.4%)</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td>Floor of Mouth</td>
<td>2 (0.1%)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Oral &amp; Other Mouth</td>
<td>21 (0.9%)</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td>Nasopharynx</td>
<td>7 (0.3%)</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Tonsil</td>
<td>20 (0.8%)</td>
<td>18</td>
<td>2</td>
</tr>
<tr>
<td>Oropharynx</td>
<td>4 (0.2%)</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Hypopharynx</td>
<td>7 (0.3%)</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Other Oral Cavity &amp; Pharynx</td>
<td>1 (0.0%)</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td><strong>INTESTINAL SYSTEM</strong></td>
<td>405 (16.5%)</td>
<td>285</td>
<td>120</td>
</tr>
<tr>
<td>Small Intestine</td>
<td>11 (0.4%)</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Large Intestine, NOS</td>
<td>4 (0.1%)</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Transverse Colon</td>
<td>9 (0.4%)</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Appendix</td>
<td>4 (0.2%)</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Cecum</td>
<td>22 (0.9%)</td>
<td>14</td>
<td>8</td>
</tr>
<tr>
<td><strong>ESOPHAGUS</strong></td>
<td>25 (1.0%)</td>
<td>22</td>
<td>3</td>
</tr>
<tr>
<td>Liver</td>
<td>63 (2.6%)</td>
<td>36</td>
<td>27</td>
</tr>
<tr>
<td>Other Biliary</td>
<td>14 (0.6%)</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Pancreas</td>
<td>82 (3.2%)</td>
<td>47</td>
<td>35</td>
</tr>
<tr>
<td><strong>BREAST</strong></td>
<td>487 (19.3%)</td>
<td>2</td>
<td>485</td>
</tr>
<tr>
<td><strong>RESPIRATORY SYSTEM</strong></td>
<td>487 (19.3%)</td>
<td>2</td>
<td>485</td>
</tr>
<tr>
<td>Lung &amp; Bronchus</td>
<td>244 (9.7%)</td>
<td>154</td>
<td>90</td>
</tr>
<tr>
<td>Nose, Nasal Cavity &amp; Middle Ear</td>
<td>8 (0.3%)</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td><strong>OTHER DIGESTIVE ORGANS</strong></td>
<td>7 (0.3%)</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td><strong>LYMPHOMA</strong></td>
<td>81 (3.2%)</td>
<td>45</td>
<td>36</td>
</tr>
<tr>
<td><strong>SKIN EXCLUDING BASAL &amp; SQUAMOUS</strong></td>
<td>33 (1.3%)</td>
<td>33</td>
<td>0</td>
</tr>
<tr>
<td><strong>BONES &amp; JOINTS</strong></td>
<td>30 (1.2%)</td>
<td>19</td>
<td>11</td>
</tr>
<tr>
<td><strong>LEUKEMIA</strong></td>
<td>80 (3.2%)</td>
<td>45</td>
<td>35</td>
</tr>
<tr>
<td>Other Leukemia</td>
<td>2 (0.1%)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>ORAL CAVITY &amp; PHARYNX</strong></td>
<td>534 (2.1%)</td>
<td>30</td>
<td>23</td>
</tr>
<tr>
<td><strong>SKIN EXCLUDING BASAL &amp; SQUAMOUS</strong></td>
<td>66 (2.6%)</td>
<td>36</td>
<td>30</td>
</tr>
<tr>
<td><strong>LEUKEMIA</strong></td>
<td>80 (3.2%)</td>
<td>45</td>
<td>35</td>
</tr>
<tr>
<td><strong>.lymphoma</strong></td>
<td>81 (3.2%)</td>
<td>45</td>
<td>36</td>
</tr>
<tr>
<td><strong>LYMPHOMA</strong></td>
<td>81 (3.2%)</td>
<td>45</td>
<td>36</td>
</tr>
</tbody>
</table>

#### AJCC Stage Distribution at Time of Diagnosis

- **Stg 0**: Localized disease confined to primary site
- **Stg 1**: Regional disease, no distant metastases
- **Stg 2**: Regional disease with distant metastases
- **Stg 3**: Distant disease with or without regional disease
- **Stg 4**: Distant disease only
- **IV**: Not Applicable
- **N/A**: Not Available
- **Unk**: Unknown

#### Summary of Oncology Data Registry Trends

**DURING THE YEAR 2016,** the Queen’s Medical Center (QMC) was the primary facility that established the initial diagnosis and/or performed the treatment for a total of 2925 patients. This was a nearly 2.5% increase in comparison to the previous year of 2,465 patients. In 2015, there were 8,065 analytic cancer cases in Hawaii, and QMC is the institution that manages the most oncology cases in the state.

---

*Side notes:*
- *N/A:* not applicable, no AJCC staging scheme for site/histology combination
- *N/A:* not applicable, no AJCC staging scheme for site/histology combination
NEWLY DIAGNOSED CANCER CASES REPORTED IN THE STATE OF HAWAI’I, 2012 – 2015*

**Number of Analytic Cases Reported by QMC, 2012 - 2016**

<table>
<thead>
<tr>
<th>Year</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>2508</td>
</tr>
<tr>
<td>2013</td>
<td>2402</td>
</tr>
<tr>
<td>2014</td>
<td>2495</td>
</tr>
<tr>
<td>2015</td>
<td>2465</td>
</tr>
<tr>
<td>2016</td>
<td>2525</td>
</tr>
</tbody>
</table>

*2015 data for the State of Hawai‘i is incomplete, and 2016 data were not available during the preparation of this report.

**CLASSIFICATION OF NEWLY DIAGNOSED CASES 2012 - 2016, THE QUEEN’S MEDICAL CENTER**

Patients who had their diagnosis and treatment at QMC (Class of Case 10-14) numbered 1,623, which accounted for 64.3% of total analytical cases. Patients who received a diagnosis of cancer from another center but were subsequently treated at QMC (Class of Case 20-22) accounted for 29.7% of the analytical case distribution. Only 6.1% of patients diagnosed with cancer at QMC elected to have their care performed elsewhere or chose no treatment at all. This underscores the premise that QMC is the provider of choice for many cancer patients in Hawai‘i. The low rate of patients electing to have their care managed elsewhere is a testament to QMC’s reputable oncology program.

**PLACE OF RESIDENCE AT DIAGNOSIS – 2016, THE QUEEN’S MEDICAL CENTER**

In 2016, there was no significant change in the distribution of residence for patients who received their oncologic care at QMC as compared to the prior year. The overwhelming majority of patients (81.6%) live on the island of O‘ahu; 17.3% of patients who received their cancer care at QMC were neighbor island residents.

**AGE & GENDER DISTRIBUTION AT DIAGNOSIS – 2016, THE QUEEN’S MEDICAL CENTER**

The majority of patients diagnosed with cancer were between the ages of 50 years to 79 years. However, nearly 14% were less than 50 years old, which emphasizes that this condition can affect young individuals. Additionally, about 13% were greater than 80 years old, which demonstrates that it can also burden the elderly population.
Caucasians were the most common group affected. With regard to the state, it is compelling that nearly 5% of cancer patients managed at QMC were Pacific Islanders, as opposed to only 3.3% of cancer patients within Hawai‘i. This emphasizes the fact that QMC not only serves Hawai‘i, but the Pacific Basin as well. QMC also continues to care for Native Hawaiians, who comprised 14.6% of all cancer patients treated in 2016.

**Race No. Cases % Cases**

<table>
<thead>
<tr>
<th>Race</th>
<th>No. Cases</th>
<th>% Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caucasian</td>
<td>621</td>
<td>24.6%</td>
</tr>
<tr>
<td>Japanese</td>
<td>600</td>
<td>23.8%</td>
</tr>
<tr>
<td>Filipino</td>
<td>417</td>
<td>16.5%</td>
</tr>
<tr>
<td>Hawaiian/Part Hawaiian</td>
<td>368</td>
<td>14.6%</td>
</tr>
<tr>
<td>Chinese</td>
<td>260</td>
<td>10.3%</td>
</tr>
<tr>
<td>Pacific Islander</td>
<td>123</td>
<td>4.9%</td>
</tr>
<tr>
<td>Korean</td>
<td>64</td>
<td>2.5%</td>
</tr>
<tr>
<td>Other</td>
<td>72</td>
<td>2.9%</td>
</tr>
<tr>
<td>Unknown</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2525</strong></td>
<td>100.0%</td>
</tr>
</tbody>
</table>

*2015 data for the State of Hawai‘i are incomplete, and 2016 data were not available during the preparation of this report.

Note: Data excludes basal and squamous cell skin cancers.

**SUMMARY OF ONCOLOGY DATA REGISTRY TRENDS (CONTINUED)**

Cancer Committee Annual Report 2016

Cancer Committee Annual Report 2016
Today, the QCC is a part of an elite network of hospitals that offer quality, leading edge, research-based cancer care at community hospitals close to home to improve the health care of disparate communities. Fully integrated with oncology services, the QCC provides advances in cancer treatments, such as in chemotherapy, biotherapy, radiation therapy, and surgery.

Aggressively treating all types of cancer, the QCC offers advanced technology combined with patient-centered, multidisciplinary care in a comfortable place of healing. Virtually every aspect of cancer diagnosis, treatment planning, and treatment is physically brought together, minimizing the need for patients and their caregivers to make outpatient visits to different providers, or to travel to the mainland for treatment.

QCC physicians and staff are experienced, knowledgeable, and caring individuals who are active in the community beyond their work. Working together as one team in one location, they deliver integrated care that is tailored to each patient’s individual needs. They are focused on providing care, support, and guidance to patients throughout their journey. Medical treatments are fully integrated with oncology services, which may include medical, surgical, and radiation oncologists, as well as registered nurses, clinical coordinators, patient navigators, licensed social workers, registered dietitians, pain management practitioners, physical therapists, and spiritual care providers. Our staff also includes multidisciplinary specialists such as cardiovascular surgeons, head and neck surgeons, gynecological oncologists, endocrinologists, and others. Able to respond to all medical emergencies, the QCC is backed by a hospital-based full code team and crisis nurse.

The QCC strives to ensure that treatment and cancer care coordination is as convenient and stress-free as possible. Our pledge is to put patients first by providing care focused on each individual’s needs and offering a full array of expert services to promote healing at all levels—body, mind, and spirit.

The QCC has a nationally-recognized, award-winning patient navigation program. Patient navigators serve as guides to help patients through the confusing and often overwhelming nature of having cancer, from diagnosis to treatment to survivorship. Patient navigation works hand-in-hand with many collaborative services, including social work, genetic counseling, psychiatry, nutrition, spiritual guidance, rehabilitation, and education on cancer care. Care during and after treatments is covered as well. After cancer treatments have been completed, the QCC’s Survivorship Program continues to help patients with management and monitoring.

Initiatives at the QCC in 2016

- Since 2015, The Queen’s Medical Center has been a certified member of MD Anderson Cancer Network®, a program of MD Anderson Cancer Center, which is ranked the leading cancer center in the nation. The affiliation gives Queen’s health professionals access to best practices, innovative treatment plans, and evidence-based guidelines. The goal is to allow Queen’s physicians who are certified by the Network to care for cancer patients at home in Hawai‘i with the support of family and friends. This access, combined with Queen’s established excellence in cancer care, serves to further improve the likelihood of positive outcomes for our cancer patients. Patient cases are reviewed by respected experts in individual fields, resulting in feedback with valuable treatment advice. Network affiliation gives patients the confidence to move forward with their therapy with the knowledge that their individual case has been carefully scrutinized. Through the Network, Queen’s certified physicians may also request expedited referrals to The University of Texas MD Anderson Cancer Center in Houston, Texas, for complex cases. Since 2016, MD Anderson affiliation has continued to benefit our cancer patients significantly.

- A quality study was conducted to address patient-reported difficulty with ‘wayfinding’ at GMC. Led by the Wayfinding Committee, the aim was to standardize and simplify the way we communicate directions to patients and visitors to ease their journey to the QCC. As a result, new maps, signage, and direction sets were created for this quality initiative.

- As part of a quality improvement initiative, our team implemented the use of Patient Prompt. Patient Prompt is a cloud-based communication platform between providers and patients that delivers courtesy appointment reminders using email, voicemail, and text messages. The goal of Patient Prompt is to reduce the number of no-shows and cancellations, and for patients to confirm appointments.

INTEGRATED ONCOLOGY SERVICES

- Diagnostics
  - Diagnostic Imaging Services
  - Diagnostic Laboratory Services
  - Expert Pathology Services, including Molecular Pathology
- Cancer Treatment
  - Advanced Radiology
  - Advanced Surgical & Medical Oncology
  - Outpatient Chemotherapy, Treatment & Cancer Care
  - Clinical Trials
- Navigation, Counseling & Support
  - Patient Navigation Services
  - Psychiatric Services
  - Licensed Social Work
  - Nutritional Counseling
  - Genetic Counseling
  - Smoking Cessation Referrals
  - Spiritual Care
  - Cancer Survivorship Program
  - Patient & Family Support Groups
  - Certified Pet Therapy Dog
  - Community Resource Referrals
- Rehabilitation
  - Physical, Occupational & Speech Therapies
  - Specialized Physical Therapy for breast cancer & lymphedema patients
- Education
  - Patient & Community Education
- Research
  - Cancer Registry
  - Cancer Research Services
- Other Services
  - Pain & Palliative Care
  - Complementary & Alternative Medicine (e.g., Acupuncture, Hearing Touch, Massage)
MULTIDISCIPLINARY CARE CLINICS: A TEAM APPROACH TO CANCER CARE

The diagnosis and management of cancer is complex. It requires the expertise of many highly trained individuals. Multidisciplinary Care (MDC) clinics at the Queen’s Cancer Center (QCC) optimize care for cancer patients by bringing together a team of experts in cases where prior treatments have been unsuccessful, clarification of roles is needed, or in other complex cases. The result is faster access to treatment and referral services, improved care coordination, less duplication of medical tests, less travel for treatment planning, and a greater opportunity to hear about clinical trials.

A Multidisciplinary Care clinic brings together health professionals with the necessary skills to consider a patient’s treatment and care options. The team considers all of the patient’s medical, physical, and support care needs. Together, they develop the best individualized care and treatment plan using National Comprehensive Cancer Network (NCCN) guidelines.

Patients receive appropriate and consistent information from all members of the team, who are also aware of personal choices. Patients have access to support services, which include patient navigation, social workers, financial assistance, and participation in Queen’s Survivorship and Pain & Palliative Care programs.

Multidisciplinary Care Clinic Team

- **Medical Oncologist:** A physician with expertise in the diagnosis and management of cancer. A medical oncologist can prescribe chemotherapy, immunotherapy, and targeted therapy to treat cancer, and is usually the primary doctor taking care of cancer-related problems.

- **Radiation Oncologist:** A physician who uses radiation to treat cancer. Examples of radiation therapy are external beam radiation, brachytherapy, stereotactic body radiation, and radioimmunotherapy.

- **Surgical Oncologist:** A physician who specializes in treating cancer with surgery.

- **Pathologist:** Although patients may never meet a pathologist, these physicians play an essential role by making accurate diagnoses of cancer through evaluating blood and tissue samples. This is a critical step, because further treatment of cancer depends on the diagnosis.

- **Other Physician Specialists:** Depending on the complexity of the cancer or the treatment plan, physicians who specialize in other areas may contribute to care. Examples include specialists who treat infections or other medical issues. Others may specialize in the gastrointestinal system, the nervous system, respiratory tract, or other areas of the body.

- **Chemotherapy Nurse:** A registered nurse who plays an important role in a patient’s overall care. Most chemotherapy nurses are certified in oncology, which means they have completed special training and are experienced in taking care of cancer patients.

- **Oncology Nurse Navigator:** A registered nurse with oncology-specific clinical knowledge who helps patients, families, and caregivers overcome health care system barriers. Nurse navigators provide education and resources to facilitate informed decision making and timely access to quality cancer care.

- **Clinical Oncology Programs Coordinator:** A registered nurse with oncology-specific clinical knowledge who coordinates peer-to-peer telephone consults between MD Anderson Cancer Center physicians and QCC’s MD Anderson network certified physicians. This nurse evaluates MD Anderson patient referrals to The University of Texas MD Anderson Cancer Center in Houston, Texas.

- **Patient Navigator Associate:** Patient navigators help patients, family members, and caregivers coordinate appointments and services and also assist with practical issues, such as childcare during treatment. Other services include housing and coordination of transportation to and from the airport for those who do not live on O’ahu.

- **Social Worker:** A social worker assesses the impact of cancer diagnoses on patients, families, and caregivers. They address issues related to coping, adjustment to the diagnosis, disease progression, and end-of-life care needs. Social workers also give counsel on advance health care directives and make referrals to community resources as needed.

- **Physical and Occupational Therapists:** These therapists help patients regain strength so that they can perform basic functions at home.

- **Speech-Language Pathologist:** A speech-language pathologist assists with speaking and swallowing issues.

- **Clinical Research Nurse:** A clinical research nurse helps enroll patients in available clinical trials. They provide information about the latest trends and clinical trials available in Hawaii for specific cancers.

- **Dietitian:** Nutrition is an important part of cancer treatment. Eating the right kinds of food before, during, and after treatment can help patients feel better and stay stronger. A registered dietitian is one of the best sources of information about diet.

- **Clinical Oncology Programs Coordinator:** A registered nurse with oncology-specific clinical knowledge who coordinates peer-to-peer telephone consults between MD Anderson Cancer Center physicians and QCC’s MD Anderson network certified physicians. This nurse evaluates MD Anderson patient referrals to The University of Texas MD Anderson Cancer Center in Houston, Texas.

- **Patient Navigator Associate:** Patient navigators help patients, family members, and caregivers coordinate appointments and services and also assist with practical issues, such as childcare during treatment. Other services include housing and coordination of transportation to and from the airport for those who do not live on O’ahu.

- **Social Worker:** A social worker assesses the impact of cancer diagnoses on patients, families, and caregivers. They address issues related to coping, adjustment to the diagnosis, disease progression, and end-of-life care needs. Social workers also give counsel on advance health care directives and make referrals to community resources as needed.

- **Physical and Occupational Therapists:** These therapists help patients regain strength so that they can perform basic functions at home.

- **Speech-Language Pathologist:** A speech-language pathologist assists with speaking and swallowing issues.

- **Clinical Research Nurse:** A clinical research nurse helps enroll patients in available clinical trials. They provide information about the latest trends and clinical trials available in Hawaii for specific cancers.

- **Dietitian:** Nutrition is an important part of cancer treatment. Eating the right kinds of food before, during, and after treatment can help patients feel better and stay stronger. A registered dietitian is one of the best sources of information about diet.
The mission of the Queen’s Radiation Oncology Department is to uphold the highest standards in cancer treatment with the most advanced technologies while providing high quality patient care through professionalism and treating each patient as ‘ohana, or family.

As Hawai’i’s premier radiation oncology facility, the Queen’s Radiation Oncology Department is the only one in the state accredited by the American College of Radiology (ACR). Only 15% of radiation oncology facilities in the U.S. carry this distinction, which gives patients the assurance that the treatments they receive are safe and accurate.

The largest and most comprehensive radiation facility in Hawai’i and the Pacific Basin, Queen’s Radiation Oncology offers the most advanced technologies and equipment. Additionally, all treatments are based on peer-reviewed, evidence-based protocols and National Comprehensive Cancer Network (NCCN) guidelines.

In 2015, the Queen’s Cancer Center became a certified member of MD Anderson Cancer Network®, a program of MD Anderson Cancer Center, which is ranked the leading cancer center in the United States. This affiliation required a rigorous evaluation of our radiation oncology program, and site recommendations and changes were made to meet MD Anderson standards of care. MD Anderson’s Physician’s Network® board also certified all 4 of our radiation oncologists after reviewing their patient chart documentation.

Being a certified member of the network combines the exceptional cancer care Queen’s offers to the people of Hawai’i with the expertise of one of the world’s leading cancer centers. The affiliation gives Queen’s health professionals access to best practices, innovative treatment plans, and evidence-based guidelines, as well as the ability to consult with physicians in peer-to-peer consultations. Patient cases can be reviewed by respected experts in individual fields, resulting in feedback with valuable treatment advice.

In 2016, based on a previous year’s quality study, the Queen’s Cancer Committee (QCC) implemented a patient care quality improvement standard (Commission on Cancer, Standard 4.8) in which 100% of breast conservation patients, regardless of age, are considered for hypofractionation. This is based on the American Society for Radiation Oncology (ASTRO)/Choosing Wisely® recommendation: Don’t initiate whole breast radiotherapy as part of breast conservation therapy in women age ≥50 with early stage invasive breast cancer without considering shorter treatment schedules. To improve the rates of “short course” offerings to patients regardless of age, it is now a standard procedure for QCC team members to discuss shorter treatment options at weekly Radiation Oncology case reviews. Additionally, new physicians are oriented to QCC departmental standards.

The Queen’s Radiation Oncology Program

The Queen’s Radiation Oncology program provides care to cancer patients at all ages, and performs both curative and palliative radiation treatments. Over 90% of radiation treatments are delivered to outpatients, most of whom are ambulatory and self-supportive. Inpatients who require intensive monitoring or other services also receive radiation treatments.

A radiation oncologist consults with each patient upon referral from the attending or primary care physician. A registered nurse interviews the patient and completes a comprehensive evaluation that includes the patient’s medical history, reason for treatment or diagnosis, treatment, and side effects education. Psychosocial and/or physical concerns are also addressed.

A treatment recommendation is discussed with the patient. After a specific course of treatment is agreed upon by the patient and the radiation oncologist, the patient undergoes treatment planning. In this step, the medical physicist and dosimetrist will provide treatment planning support to the physician.

Precise radiation treatments are delivered by certified radiation therapists prescribed by and under the direction and supervision of a radiation oncologist. During the course of radiation treatments, each patient is seen once each week to be evaluated for any treatment-related side effects, and for any other questions or concerns that the patient may have. The entire team also helps monitor each patient with regard to symptom management.

If any issues arise outside the scope of the immediate team, the patient is referred to an appropriate health professional, such as a dietitian, social worker, pain management physician, and/or a patient navigator. After the completion of the treatment course, the patient is scheduled for periodic follow-ups with the radiation oncologist to help monitor treatment outcomes.

In addition to standard treatments, patients are diligently screened to determine eligibility for enrollment in leading-edge radiation clinical trials, some of which are only available at Queen’s.

Continued on next page
QUEEN’S RADIATION ONCOLOGY TECHNOLOGIES & THERAPIES

The Radiation Oncology Department offers an extensive range of advanced treatment technologies and treatments, many of which can be found nowhere else in Hawai‘i. Safe and accurate radiation treatments are given with the use of ionizing radiation equipment (linear accelerators) and radioactive sources. All equipment and sources are inspected, tested, and calibrated regularly by board-certified medical physicists. Collaborative approaches to treatment ensure unsurpassed clinical care in the delivery of radiation treatments to our patients. Technologies and treatments include:

• Three external beam radiation therapy treatment machines which provide a variety of effective ways to deliver radiation treatment protocols depending on each patient’s individual case:
  - Elekta Infinity. The only one of its kind in Hawai‘i, the GCL’s Elekta Infinity provides leading edge technology with enhanced patient safety features. Designed with proven, 7th generation digital technology, the Elekta Infinity redlines treatment position, speed, and control to give superior radiation treatments. Some of the features of this system include built-in 3D CT imaging, real time motion tracking, and 5mm multi-leaf collimator. A very unique capability of the Elekta Infinity is volumetric intensity modulated arc therapy (VMAT). VMAT allows the radiation beam to be continuously shaped around a tumor like shrink wrapping for better accuracy and faster treatment times. VMAT also requires significantly lower doses of radiation for effective treatments.
  - TomoTherapy HiArt. Unique in Hawai‘i, the TomoTherapy HiArt system combines an advanced form of intensity modulated radiation therapy (IMRT) with CT scanning for image-guided radiation therapy (IGRT). This system provides unprecedented accuracy in treating tumors effectively while dramatically reducing toxicity to surrounding healthy tissues.
  - Dual-Energy Varian Multi-Leaf 2100. A radiation treatment machine capable of a wide range of photon and electron energies, and varying sizes of treatment fields that can attack cancersous tumors at different depths and locations within the body.

• Other specialized treatments include:
  - Radionics XKnife for Stereotactic Radiosurgery (SRS)
  - Stereotactic body radiation therapy (SBRT) using TomoTherapy HiArt
  - Variseed prostate seed implants
  - Philips high dose rate (HDR) brachytherapy for gynecologic, prostate, and other malignancies

• Multiple treatment planning systems include:
  - Philips Big Bore CT Simulator designed specifically for radiation oncology with the latest in radiation treatment planning, including 4D gating, which enables the most accurate treatment of tumors that move with breathing, particularly in the lung, liver, and breast.
  - ADAC Pinnacle for IMRT and 3D teletherapy
  - Varian Brachyvision for High Dose Rate (HDR) brachytherapy

The Inpatient Oncology Unit places a great emphasis on coordinated each patient’s care to ensure a dedicated, multidisciplinary team of cancer experts who carefully coordinate each patient’s care to ensure that treatment is highly individualized, progressive, and comprehensive.

During a patient’s stay at the hospital, daily multidisciplinary rounds are conducted to communicate, collaborate, and coordinate efficient and effective transitions of care. All nurses are specialty-trained in chemotherapy administration, and have expert knowledge of the different types of cancer and symptom management. An increasing number of the unit’s registered nurses are acquiring national certification in oncology, demonstrating dedication and commitment to providing the best cancer care.

The Inpatient Oncology Unit places a great emphasis on continually improving the quality-of-care provided to patients. For example, a quality study was conducted to improve staff response time to patient call lights. As a result, our team implemented a “no pass zone” to reduce response time. Staff are trained to not pass an illuminated call light and to address the issue before ‘passing’. Staff also increased the frequency of checking in with their patients every hour. As a result of a previous year’s quality study, the unit also implemented a quality improvement initiative focused on suicide risk assessment of oncology patients.

GMC’s oncology staff is also dedicated to supporting community efforts that raise awareness and funds for cancer programs, such as annual participation in the Honolulu Marathon to benefit the Leukemia and Lymphoma Society; the American Cancer Society’s Relay For Life; the Making Strides Against Breast Cancer Walk; and the Susan G. Komen Race for the Cure. The staff also supports Oncology on Canvas and the American Cancer Society’s “I Can Cope” classes for oncology patients and their families. An Artist in Residence Program also offers cancer patients, caregivers, and staff the opportunity to explore their own creativity to help cope with the challenges of cancer.
CANCER SURVIVORSHIP PROGRAM

The Queen’s Medical Center (QMC) Cancer Survivorship Program is the first adult, hospital-based survivorship program in Hawaii. Begun in 2005, the goal of the program is to improve the quality-of-life of cancer survivors by assisting with their transition after active treatment is complete. The Cancer Survivorship Program helps coordinate follow-up care and cancer surveillance by providing the patient with a comprehensive, individualized survivorship care plan, which includes a treatment summary, follow-up plan, and education regarding potential later effects from cancer treatment. The program is staffed by an oncology certified RN (OCN) and a survivorship associate on the hospital campus.

In 2016, the Commission on Cancer (CoC) required that at least 25% of eligible patients receive a survivorship care plan. The Survivorship Program provided 401 patients with survivorship care plans, which represented 28.9% of eligible patients. Beginning in 2017, at least 50% of eligible patients are required to receive a survivorship care plan.

Efforts to improve delivery of survivorship care plans (SCP) to more eligible patients included the following:
- Incorporated SCP into Queen’s CARE*Link electronic medical records with implementation of Beacon module
- Expanded screening efforts to identify more oncology surgical patients by partnering with Queen’s MD Anderson certified physicians
- Mailed SCPs and provided phone consults to patients who decline in-person consults
- Provided survivorship visits with physician follow-up appointments
- Visited North Hawai‘i Community Hospital monthly for survivorship consults

Other highlights in 2016 include:
- Submitted an NIH R21 grant application: Evaluating Survivorship Care Plan Efficacy in Hawai‘i’s Adult Cancer Survivors
- Contributed members of the 2016 Hawai‘i Cancer Plan as members of the Quality of Life Action Team
- Assisted the Hawai‘i Comprehensive Cancer Control Coalition in coordinating Journey Together focus group meetings on neighbor islands
- Hosted the annual Cancer Survivorship Celebration

TOTAL NUMBER OF PATIENTS RECEIVING SURVIVORSHIP CARE PLANS (JAN 1 – DEC 31, 2016): 401

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japanese</td>
<td>100</td>
<td>24.9%</td>
</tr>
<tr>
<td>Caucasian</td>
<td>97</td>
<td>24.2%</td>
</tr>
<tr>
<td>Filipino</td>
<td>50</td>
<td>12.5%</td>
</tr>
<tr>
<td>Chinese</td>
<td>47</td>
<td>11.7%</td>
</tr>
<tr>
<td>Native Hawaiian</td>
<td>44</td>
<td>11.0%</td>
</tr>
<tr>
<td>Other</td>
<td>63</td>
<td>15.7%</td>
</tr>
</tbody>
</table>

Cancer Site

<table>
<thead>
<tr>
<th>Cancer Site</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast</td>
<td>123</td>
<td>30.67%</td>
</tr>
<tr>
<td>Gynecologic malignancies</td>
<td>75</td>
<td>18.70%</td>
</tr>
<tr>
<td>Head and Neck</td>
<td>58</td>
<td>14.46%</td>
</tr>
<tr>
<td>Lung</td>
<td>40</td>
<td>9.98%</td>
</tr>
<tr>
<td>Prostate</td>
<td>23</td>
<td>5.74%</td>
</tr>
<tr>
<td>Melanoma</td>
<td>14</td>
<td>3.49%</td>
</tr>
<tr>
<td>Colorectal</td>
<td>12</td>
<td>2.99%</td>
</tr>
<tr>
<td>Other</td>
<td>56</td>
<td>13.97%</td>
</tr>
</tbody>
</table>

Island

<table>
<thead>
<tr>
<th>Island</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>O‘ahu</td>
<td>371</td>
<td>92.5%</td>
</tr>
<tr>
<td>Hawai‘i</td>
<td>24</td>
<td>6.0%</td>
</tr>
<tr>
<td>Molokai</td>
<td>2</td>
<td>0.5%</td>
</tr>
<tr>
<td>Kaua‘i</td>
<td>2</td>
<td>0.5%</td>
</tr>
<tr>
<td>Maui</td>
<td>2</td>
<td>0.5%</td>
</tr>
</tbody>
</table>

Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>271</td>
<td>76.0%</td>
</tr>
<tr>
<td>Male</td>
<td>130</td>
<td>24.0%</td>
</tr>
</tbody>
</table>

PATIENT NAVIGATION PROGRAM

Having a cancer diagnosis and getting through treatment can be overwhelming, and navigating through the complex health care system is often confusing. The goal of the Queen’s Cancer Center Patient Navigation Program is to guide and help patients through this difficult journey. Having served over 8,000 patients since 2006, the award-winning Patient Navigation Program has become a service that patients, families, medical staff, and the community has come to rely on and trust. The Queen’s Cancer Center is unique in that it is staffed by both clinical nurse navigators and ‘lay’ navigators (i.e., patient navigator associates) that work together to coordinate a seamless continuity of care.

Clinical nurse navigators are registered nurses with oncology-specific clinical knowledge. Nurse navigators provide education and resources to facilitate informed decision-making and timely access to quality cancer care. Some of the services nurse navigators provide include:
- Educating patients/families regarding disease, treatment, side effects, and adverse reactions
- Initiating and completing patient treatment summary plans
- Participate in tumor board conferences

Patient navigator associates are warm, compassionate, empathetic, and culturally competent. They use their years of expertise to provide cancer patients with seamless coordination of services and to connect them to the right people and programs. Some of the many services patient navigator associates provide for patients and their caregivers are to:
- Coordinate appointments
- Coordinate transportation, travel, and lodging
- Facilitate access to financial assistance
- Facilitate access to community resources
- Facilitate access to support groups and classes
- Provide and link to educational materials
- Facilitate access to interpreter services
- Facilitate referrals to other support team members

The patient navigation team provides individualized assistance to patients, families, and caregivers to help them traverse the complexities of the cancer care delivery system.

Highlights in 2016 Include:
- Integration of Patient Navigation Program at North Hawai‘i Community Hospital (NHCH) and QMC – West O‘ahu
- Continued collaboration with MD Anderson Cancer Center
- 1,254 new patients assisted by Patient Navigation Program

Queen’s Cancer Center Patient Navigator Associates and Social Workers
The care of people living with cancer continues to be a major focus of The Queen’s Medical Center Pain and Palliative Care Department. Available at the request of a patient’s medical, radiation, or surgical oncologist, Pain and Palliative Care clinicians work with patients and family members to prevent and relieve the pain, symptoms, and stress related to their illness, and to provide an added layer of support. The goal is to promote the best possible quality of life throughout the course of cancer treatment. The Pain and Palliative Care Department was the first in Hawai‘i to be awarded The Joint Commission’s Certificate of Distinction for Advanced Certification in Palliative Care. In 2016, the Pain and Palliative Care received more than a thousand requests for consultation throughout The Queen’s Medical Center. Of these requests, nearly half were for oncology patients, with growing numbers served in our outpatient program located in the Queen’s Cancer Center.

Head and neck cancers are devastating. Even with today’s advanced procedures, the surgery necessary to remove tumors can leave significant cosmetic deformity, as well as functional problems, such as facial paralysis, or issues with speech and swallowing. The goal of the Queen’s Head and Neck Institute is to not only eradicate head and neck cancers, but to return people to their life before diagnosis through advanced and often extensive reconstructive surgery. The Head and Neck Institute’s goal of restoring quality-of-life before surgery is a type of advanced cancer care that goes beyond most institutions.

Focusing on patients with malignant and benign tumors, the Head and Neck Institute is a Queen’s Cancer Center specialty clinic that delivers the best possible care using a multidisciplinary approach. The team includes head and neck specialty surgeons, radiation oncologists, medical oncologists, neuro-radiologists, dentists, pain and palliative specialists, a counselor, and a social worker. Inpatient and outpatient nurses are also a part of the team, as well as speech pathologists, physical therapists, and dietitians. All team members specialize in head and neck cancer treatment and dedicate their work solely to the Head and Neck Institute.

Patients are usually referred by their primary care physician or another specialty physician. A full outpatient evaluation normally takes three to five business days, depending on the amount of testing and consultation needed to assess the patient’s condition and to recommend a specially designed treatment plan. All new cancer patients are presented to a multidisciplinary Head and Neck Tumor Board that includes specialists in head and neck surgery, radiation oncology, medical oncology, dentistry, speech pathology, and research. Treatments may include advanced technology robotic and minimally invasive surgical techniques, XKnife stereotactic radiosurgery, and the most current targeted therapies, as well as clinical trials. Treatment may involve non-surgical options for many patients, including radiation therapy and/or chemotherapy.

QUEEN’S HEAD AND NECK INSTITUTE

MAJOR TYPES OF TUMORS TREATED

- Oral cavity
- Pharynx
- Larynx
- Thyroid & parathyroid
- Salivary glands
- Skin cancers, including melanoma
- Nasal cavity & paranasal sinuses
- Skull base (including pituitary gland)
- Ear & temporal bone
- Neck
- Acoustic neuroma (vestibular schwannoma)
- Sarcomas of the head & neck

Other conditions treated

- Head & neck issues from tumors elsewhere in the body
- Longstanding facial nerve paralysis

PAIN & PALLIATIVE CARE

THE QUEEN’S HEAD AND NECK INSTITUTE

2016 PUBLICATION

Queen's Pharmacy Services plays a vital role in the treatment of cancer patients. Queen's clinical pharmacists function as intermediaries between patients and physicians, and are specifically assigned to care for cancer patients, verifying all medication orders, including chemotherapy.

A pharmacist counsels each patient who takes certain high risk medications, such as oral chemotherapy, and monitors patient compliance. Counseling includes explaining medications and how they work, how much and how often to take them, and what the patient can do to manage side effects.

Clinical pharmacists collaborate daily with physicians, nurses, case managers, and social workers to help with the management of patients from admission through discharge. They help to optimize therapy by adjusting medications to the patient’s clinical response. Pharmacists also provide antibiotic monitoring and intravenous nutrition.

PHARMACY SERVICES provides inpatient and discharge medications for the entire medical center, with pharmacists available 24 hours a day, 7 days a week. Pharmacists verify the correct medication, dose, and schedule for each patient, and are a drug information resource for physicians, nurses, and patients.

Clinical Trials Team

Staffed by oncology research nurses, research associates, and other clinical research professionals, the Queen’s Oncology Research Department provides a wide range of support services for patients, physicians, and Queen’s Cancer Center staff to participate in clinical research. Cancer clinical research trials offer patients access to cutting-edge therapies, while helping researchers find better ways to prevent and treat the disease. Clinical trials offer patients the opportunity to take advantage of all kinds of new therapies, including new drugs or new ways to use existing drugs, types of surgeries, radiation therapies, and new ways to combine different cancer treatments. Some studies evaluate cutting-edge therapies while others compare two different treatments to determine which is better. All standard cancer treatments used today are available because years ago, patients agreed to participate in clinical trials that proved those treatments worked.

The Oncology Research Department pre-screens and recruits patients, and coordinates clinical trials in compliance with Good Clinical Practice (GCP), an international ethical and scientific quality standard for the conduct, recording, and reporting of clinical trials involving the participation of human subjects. Compliance with GCP provides assurance that the rights, safety, and well-being of trial subjects are protected, and that the clinical trial data is credible.

Clinical trials are classified based on four clinical phases (I-IV) of new drug or new treatment development. The Queen’s Cancer Center’s clinical trial portfolio includes studies from all four phases.
Phase I: Studies that test a new drug or treatment in a small group of people for the first time to evaluate its safety, determine a safe dosage range, and identify side effects. The staff and facilities to conduct both inpatient and outpatient Phase I clinical trials are available at Queen’s.

Phase II: Studies in which a new drug or treatment is given to a larger group of people of a few hundred to test its effectiveness and further evaluate its safety in the dosage range established from Phase I trials.

Phase III: Multi-institution studies in which the new drug or treatment is given to thousands of people to confirm effectiveness compared to currently available standard treatments. This phase also monitors side effects and assesses the risk-benefit relationship for the intended use of the drug or treatment, which supports FDA-approval to market the drug or treatment.

Phase IV: Studies done after a drug or treatment has marketing approval. These studies, also known as post-marketting studies, are often required as a condition of approval by the FDA to provide additional long-term safety and efficacy data. Phase IV clinical trials may also be conducted to increase awareness of a new drug among physicians, or to compare the drug or treatment to other marketed products.

Through its partnership with the Hawaii Cancer Consortium (HCC), the Oncology Research Department has a leadership role in fostering a community-wide, coordinated effort to improve cancer care in the State of Hawai‘i.

Through its partnership with the Hawaii’s Cancer Consortium (HCC), the Oncology Research Department has a leadership role in fostering a community-wide, coordinated effort to improve cancer care in the State of Hawaii. We are fully engaged in the selection process, launch, and conduct of clinical trials that our physician researchers determine are relevant for our local population.

The Oncology Research Department continues to work closely with HCC members to develop centralized procedures and shared processes to improve the efficiency of the clinical trials process.

The implementation of the OnCore Clinical Trials Management System (CTMS) continues to move forward. The modules that are currently well supported by HCC are Regulatory, Protocol, and Subject Management. Work is ongoing to activate additional modules to take full advantage of the CTMS.

The Queen’s Cancer Center continues with year three of the University of Hawai‘i Cancer Center’s National Cancer Institute Community Oncology Research Program (NCORP) grant. The overall mission of the five-year grant is to bring cancer prevention, control, screening/post-treatment surveillance, treatment, and imaging trials—as well as health-related quality-of-life and cancer care delivery research trials—to individuals in their own communities.

Additionally, QMC is the Cancer Care Delivery Research (CCDR) site for the Minority/Underserved for NCORP, which provides scientific and administrative oversight for CCDR in Hawaii. CCDR-specific clinical trials examine how social factors, financing, organizations, health technologies, health care providers, and individual behavior affects cancer outcomes.

In 2016, The Queen’s Medical Center portfolio of clinical research studies (treatment and non-treatment) included the disease sites below. Overall, all patient accrual to clinical trials was 14.3% with respect to QMC’s 2015 total analytic cases.

- **Brain (Glioma)**
- **Breast**
- **Gastrointestinal (Colorectal, Esophageal, Esophageal Gastric Junction, Liver, Pancreas)**
- **Genitourinary (Prostate, Bladder, Renal)**
- **Gynecologic (Cervical, Vulva, Endometrial, Ovarian, Fallopian, Peritoneal)**
- **Head & Neck**
- **Hematologic (Non-Hodgkin’s Lymphoma, Leukemia, Myeloma)**
- **Lung**
- **Melanoma**
- **Symptom Management**
- **Thyroid**

In 2016, The Queen’s Medical Center portfolio of clinical research studies (treatment and non-treatment) included the disease sites below. Overall, all patient accrual to clinical trials was 14.3% with respect to QMC’s 2015 total analytic cases.

- **Inpatient**
- **Outpatient**

- **Hematologic (Non-Hodgkin’s Lymphoma, Leukemia, Myeloma)**
- **Lung**
- **Melanoma**
- **Symptom Management**
- **Thyroid**

A. Burns School of Medicine. It also serves as the home critical educational cores of the University of Hawai‘i John A. Burns School of Medicine. It also serves as the home base of the Pathology Residency Training Program, which is the only ACSME-accredited program in Hawai‘i that emphasizes cancer diagnostics and management.

The Molecular Diagnostics Laboratory offers innovative techniques to define gene expression within cells and tissues, including next-generation sequencing, fluorescence in situ hybridization (FISH), cytogenomics, laser capture microdissection, and hyperspectral imaging. There is an active operating agreement with MD Anderson’s Genomic Technology program where two pathology fellows a year visit our laboratory to be trained in advanced diagnostics.

**MOLECULAR DIAGNOSTICS LABORATORY**

Molecular diagnostics is a technique used to analyze biological markers in an individual’s complete set of genetic instructions, or genome. By identifying certain biomarkers, we can predict which subgroups of patients are likely to respond to specific anti-cancer drugs. As Hawai‘i’s only personalized medicine program, the Molecular Diagnostics Laboratory performs over 15,000 tests per year, providing cancer genomic profiling for hereditary cancer screening, targeted therapy, and clinical trials selection.
T he Hospital Ministry Department provides spiritual and emotional care support to patients, their loved ones, and the Queen’s health care team 24 hours a day, 7 days a week. While religion is one way that “spirituality” is expressed, the term is much broader, addressing the ways that people connect to the divine, to self, and to others to create meaning in their lives.

Upon request, interfaith hospital chaplains facilitate spirituality groups for cancer survivors and their loved ones. These sessions offer an opportunity for individuals facing similar circumstances to connect and share personal journeys and sources of spiritual strength. The spirituality group is designed to be a safe place for everyone to explore, process, and share. Differences are honored and respected. Participants are also invited to collaborate in the selection of group themes, including such topics as feeding one’s spirit, anger, authenticity, forgiveness, hope, joy, love, and peace. All cancer survivors and their loved ones are welcome to attend.

IMAGING SERVICES

Queen’s Imaging Services offers many types of advanced imaging technologies to diagnose diseases and develop therapy plans. All procedures are performed by registered and certified technologists and interpreted by board-certified radiologists. Imaging Services has the broadest range of radiology and ultrasound services at The Queen’s Medical Center (QMC), as well as various imaging capabilities at The Queen’s Medical Center – West O’ahu, the Queen’s Health Care Centers – Hawai’i Kai, and the Physicians Office Buildings 2, 3, and West – O’ahu.

Imaging Services provides lung cancer screenings with low dose CT scans of the chest for patients with high risk of lung cancer due to significant smoking history. Research has shown an approximately 20% reduction in mortality from lung cancer due to early detection.

Recently, Queen’s Nuclear Medicine acquired a SPECT/CT system. Obtaining functional SPECT and anatomic CT data together improves the ability to find lesions, reduces false positives, and clarifies questionable lesions by better localization compared to SPECT alone. SPECT/CT is also superior in the assessment of endocrine and neuroendocrine tumors. The system is better in tumor localization and characterization, leading to a decrease in the number of ambiguous findings. In addition, SPECT/CT has been very beneficial in ruling out metastatic disease bone scans, and in determining the location of sentinel lymph nodes to tumors in lymphoscintigraphy (study of the lymphatic system).

COMPREHENSIVE GENETICS CENTER

Genetic counselors hold a monthly support group for individuals who have a BRCA gene mutation, which may produce hereditary breast-ovarian cancer syndrome in affected individuals. The support group is open to all patients with a BRCA mutation.

In 2016, the Queen’s Comprehensive Genetics Center had 704 individual cancer genetic counseling/risk assessment patient visits, including patients with a personal and/or family history of cancer.

Approximately 5-10% of cancers are associated with a hereditary cancer syndrome.

Cancer Committee Annual Report 2016
With a staff of master-level licensed social workers, Queen's Social Work Services provides counseling for patients diagnosed with cancer. The staff helps answer questions, as well as addresses feelings, including loneliness, sadness, and anxiety. Social workers help plan for the future, provide education, and access community resources.

As creative problem solvers, the staff works as a team with physicians, nurses, navigators, psychiatrists, and other medical professionals to address the whole person, not just the diagnosis of cancer.

Continuing & New Initiatives

- Continued collaboration with social workers in the Emergency, inpatient, and outpatient departments to provide continuity-of-care and to increase patient satisfaction.
- As psychological, social, financial, and behavioral issues may interfere with a patient’s treatment plan and adversely affect treatment outcomes, social workers provide Distress Thermometer assessment, counseling, and referrals, and collaborate with the Queen’s Cancer Center team to give integrated, high-quality care. In 2016, a full-time Social Worker was added to the Head and Neck Institute to meet the needs of the increased numbers of new patients.
- Collaborated with the staff at North Hawai‘i Community Hospital and Queen’s – West O’ahu to meet the needs of the increased numbers of new patients.
- A full-time Social Worker was added to the Head and Neck Institute to meet the needs of the increased numbers of new patients.
- Facilitated a 4-week CLIMB (Children’s Lives Include Moments of Bravery) Program designed to help children of cancer patients cope with the emotional stress the disease can cause in families. Developed and facilitated a separate parent group that met simultaneously. Participants of the group reported that they enjoyed and benefited from this program.
- Facilitated monthly Caregiver, Breast Cancer, and Lung Cancer support groups.

Meeting Community Needs

Facilitated 4-week CLIMB (Children’s Lives Include Moments of Bravery) Program designed to help children of cancer patients cope with the emotional stress the disease can cause in families. Developed and facilitated a separate parent group that met simultaneously. Participants of the group reported that they enjoyed and benefited from this program.

CLINICAL SOCIAL WORK SERVICES

- Assessment, diagnosis, planning, and treatment of patient and family psychosocial needs
- Brief therapy for newly diagnosed patients and families with adjustment to illness issues
- Brief therapy for patients experiencing progression of disease
- Community resource linkage
- Crisis intervention
- Substance abuse counseling
- Grief/bereavement therapy
- Advance care planning

SOCIAL WORK SERVICES

CLINICAL SOCIAL WORK SERVICES

- Assessment, diagnosis, planning, and treatment of patient and family psychosocial needs
- Brief therapy for newly diagnosed patients and families with adjustment to illness issues
- Brief therapy for patients experiencing progression of disease
- Community resource linkage
- Crisis intervention
- Substance abuse counseling
- Grief/bereavement therapy
- Advance care planning

THE QUEEN'S WOMEN'S HEALTH CENTER

There was a 23% increase in new patients screened at the Queen’s – Punchbowl Cancer Center. This increase is partially attributed to improved efficiency in collection, referral, and tracking of the Distress Screening data.

Meeting Community Needs

Facilitated a 4-week CLIMB (Children’s Lives Include Moments of Bravery) Program designed to help children of cancer patients cope with the emotional stress the disease can cause in families. Developed and facilitated a separate parent group that met simultaneously. Participants of the group reported that they enjoyed and benefited from this program.

Facilitated monthly Caregiver, Breast Cancer, and Lung Cancer support groups.

Mammography

Early detection is the best defense against breast cancer. At the Women’s Health Center, digital mammography is available in 2D and 3D. Our 3D digital mammogram technology, or Tomosynthesis, is an advanced technology screening and diagnostic tool designed for early breast cancer detection that can be done at the same time as 2D mammography. The 3D mammography technology provides a better way to find breast cancer when tumors are smaller and can be treated with simpler procedures with greater success. Tomosynthesis has improved cancer detection rates by 27%, with a 40% increase in invasive cancer detection.

With Tomosynthesis, 16 images are taken through an arc from different angles, versus four in traditional 2D mammography. While 2D mammography images can be confusing when different layers of tissue overlap, Tomosynthesis images can be viewed separately or put together as a 3D reconstruction of the breast tissue. It is especially effective for examining dense breast tissue prevalent in many ethnic groups in Hawaii. The advanced technology also uses about half the amount of radiation of other mammography machines. Tomosynthesis 3D mammography is available at the following Queen’s facilities on the island of O’ahu:

- The Queen’s Medical Center – Punchbowl, Women’s Health Center
- Physicians Office Building 3 Imaging
- The Queen’s Medical Center – West O‘ahu
- Queen’s Health Care Centers – Hawai‘i Kai

WHC Patient Navigation Program

The WHC’s Patient Navigator Program was a first in Hawai‘i and is still a service found at few other health care facilities. Patient navigators assist patients from abnormal mammogram to diagnosis. They are trained to provide support for clinical needs while also giving emotional support if an abnormality is detected on a routine mammogram.

The program provides services for patients who require:

- Additional imaging services resulting from an initial screening mammogram;

Continued on next page
Breast cancer rehabilitation for pain, weakness, and fatigue includes:
- Pre-biopsy and post-biopsy support;
- One-on-one meetings when a biopsy is recommended;
- Scheduling of follow-up appointments.

There are three patient navigator associates at the WHC. The first is assigned to patients at the onset of an abnormal mammogram. The patient navigator associate contacts the patient to schedule a diagnostic mammogram appointment and evaluates the needs of the patient to include financial assistance, emotional support, and transportation services. The navigation process continues if a breast biopsy is recommended. If there is a cancer finding from a breast biopsy, the second patient navigator associate assists and guides the patient from treatment to survivorship. The patient navigator associate works with the patient throughout treatment, meeting them when they arrive, giving them support when needed, and answering questions about the process. The third patient navigator associate is responsible for community outreach, educating girls and women about breast health, and matching eligible women with facilities to schedule their annual mammograms.

Physical Therapy
Women’s Health Physical Therapy is offered to improve quality-of-life for all women. WHC physical therapists have specialized training to perform comprehensive examinations, identify problem areas, and formulate a treatment plan to reduce pain, maximize function, and enable patients to manage these issues at home. Cancer-related treatments include:
- Breast cancer rehabilitation for pain, weakness, and tightness; and
- Lymphedema treatments for swelling after breast cancer treatment.

2016 Breast Program Report
- The WHC’s Breast Program received its third re-certification by the American College of Surgeons’ National Accreditation Program for Breast Centers (NAPBC) in April 2015. Under the guidance of the Cancer Committee, the Breast Program Leadership Committee oversees and coordinates 27 highly specific standards that must be met to earn and maintain national accreditation. The Queen’s Medical Center’s commitment to these quality standards of care ensures the highest quality of care for patients.
- A weekly interdisciplinary breast cancer conference focuses on treatment planning for newly diagnosed and recurrent breast cancer patients, providing a forum to discuss recent advances in breast cancer care, clinical trial availability, comprehensive updates, and to generate consensus in the community regarding quality breast care using National Comprehensive Care Network guidelines. Participation is designed for all practitioners involved in the care of patients, including primary care physicians, breast radiologists, pathologists, patient navigators, breast surgeons, plastic surgeons, medical oncologists, radiation oncologists, nurses, mammographers, sonographers, pharmacists, social workers, clinical research staff, pain specialists, geneticists, physical therapists, and cancer registrars.

E       ach year, prevention and early-detection/screening programs are offered by the Queen’s Cancer Center (QCC). They are based on community needs and are monitored to ensure that the services provided best serve both patients and the community.

The QCC’s outreach activities are developed based on American Cancer Society cancer awareness calendar guidelines. Events are planned to target specific cancer types and identity community needs. Programs offered by the American Cancer Society are incorporated into educational classes, and evidence-based guidelines are used for cancer prevention.

These events are designed to help the community understand the importance of cancer awareness and prevention. Brochures and resource materials are provided by the American Cancer Society, Cancer Care, and other certified organizations, and are used as tools to educate the public. Cancer patients and family members are encouraged to participate in art classes, support groups, and educational offerings to help them with the various aspects of coping with a cancer diagnosis. Patients are made aware of educational classes and support groups through staff, QCC website, newspaper ads, flyers, and a quarterly calendar of events. The QCC also educates the public about the importance of colon health, targeting mainly people age 50 or older. In 2016, QMC hosted two events, one of which was a first to be offered at Queen’s – West O’ahu.

Colon Cancer Awareness Events
The American Cancer Society’s cancer awareness calendar marks March as colon cancer awareness month. This annual event educates people about the importance of colon health, targeting mainly people age 50 or older. In 2016, QMC hosted two events, one of which was a first to be offered at Queen’s – West O’ahu.

Continued on next page
Educational booths were staffed by Queen’s GI Services, Oncology, and Endoscopy departments. Information and materials provided on awareness and prevention follow guidelines from the American Society of Gastroenterology (ASGE) and the Society of Gastroenterology of Nursing (SNGA). Health care professionals encourage people to schedule a colonoscopy at age 50, and talk to their doctor if they have a family history of colon cancer.

Queen’s – Punchbowl had an estimated 350 people in attendance; Queen’s – West O’ahu had 53. Participant evaluations indicated that conducting the event at Queen’s – West O’ahu was helpful, and a significant number noted that they want to see more of these events at this location. As Queen’s – West O’ahu and its surrounding community grows, we predict that attendance at community outreach events will increase, and that we will be able to reach more people with awareness and prevention education on colon cancer.

Skin Cancer Screening Events
Annual skin cancer screening events have been held at the Queen’s – Punchbowl campus for the past 6 years. In 2016, skin screenings were also offered at Queen’s – West O’ahu and at Molokai General Hospital. Using guidelines from the American Academy of Dermatology, dermatologists volunteered to offer free screenings at all three locations. Copies of screening forms were sent to patients’ PCPs for follow-up for all abnormal findings.

Head & Neck Cancer Screening Event
Oral screening was performed by physicians from The Queen’s Head and Neck Cancer Institute and dentists from the Queen’s Dental Clinic. Screening forms and guidelines used were from the Head and Neck Cancer Alliance. At the 2016 screening event, there were 84 patients screened, 19 of whom had abnormal findings. Screening forms were sent to the patients’ PCPs. Calls were made to ensure that they were received and a follow-up appointment was made to discuss the findings with the patient.

2016 Skin Screening
<table>
<thead>
<tr>
<th>No. of People Screens</th>
<th>Abnormal Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Queen’s – Punchbowl Campus</td>
<td>88</td>
</tr>
<tr>
<td>Queen’s – West O’ahu</td>
<td>35</td>
</tr>
<tr>
<td>Molokai General Hospital</td>
<td>17</td>
</tr>
</tbody>
</table>

Other Community Activities & Educational Classes
- I Can Cope – Nutrition Before and After Cancer Treatment
- Look Good Feel Better Educational Class
- Cancer Survivorship Celebration: Annual “Celebration of Life” event for cancer survivors and their caregivers.
- PaintFest America: A national event hosted by the Foundation for Hospital Art.
- Healing Through Art: An art program for cancer patients that meets twice monthly.
- Oncology on Canvas: This annual event brings together cancer patients and their caregivers to enjoy a fun day of painting.

Support Groups
- Breast: A forum for women to discuss and share issues related to breast cancer.
- BRCA+: A place to find support for those with a BRCA gene mutation and meet others who have experienced or may be experiencing the same situation and have the same questions.
- Caregivers: Addresses the needs of caregivers and gives them the resources to help them keep a balanced lifestyle while caring for a loved one.
- Lung: Survivors share and help one another cope with the difficulties the disease can cause.
- Head & Neck: Warriors help newly diagnosed patients who are battling cancer of the brain, mouth, throat, thyroid, and esophagus.
- CLIMB (Children’s Lives Include Moments of Bravery): A program designed to help children of cancer patients cope with the emotional stress this disease can cause in families.

Other noteworthy features and developments in Food & Nutrition Services include:
- The oncology clinical dietitian services both inpatient and outpatient areas for greater continuity.
- A regular clinical nutrition satisfaction survey is conducted for oncology areas. Favorable feedback and comments received from patients indicate a high demand for services in the Queen’s Cancer Center and Radiation Oncology areas.
- Nutrition consult referrals from patient navigators increased to increase in 2016.
- Monthly nutrition classes for cancer patients have transitioned to a standardized, curriculum-based “I Can Cope” training class. The class is offered to the public and taught by Queen’s RDs who have completed “I Can Cope” training modules.

FOOD & NUTRITION SERVICES

In partnership with Sodexo, Queen’s Food & Nutrition Services delivers quality meal service and clinical nutrition care services to patients. Queen’s upholds strict food quality and sanitation standards, such as the Gold Check program and Hazard Analysis Critical Control Points (HACCP). At Queen’s food services personnel must also pass training on food preparation methods, safety and sanitation, and on hospital food service issues, such as special diets for patients.

Food & Nutrition Services provides a registered dietitian (RD) for all patients on Queen’s inpatient oncology unit. An RD is available to help with appetite changes, weight loss, and other complications. They obtain patient food preferences, provide nutrition education for those who require special diets; and consult with pharmacists, nurses, case managers, and physicians to provide optimal nutrition for cancer patients. Patients are also referred from Radiation Oncology, the Queen’s Cancer Center, and the Head and Neck Institute for individualized nutrition counseling.

An RD also:
- Provides monthly group classes for patients seeking information on dealing with the side effects of cancer treatment
- Sees patients who want more information on an individual basis
- Conducts classes on healthy eating to prevent cancer
- Holds classes for those who have completed treatment and wish to improve their diets
- Co-facilitates a monthly cancer support group
- Attends other support groups as requested.

Oncology inpatients and those receiving extended treatments at the Queen’s Cancer Center can order meals through Sodexo’s At Your Request® Room Service by calling the Concierge Center between 6:30 am and 6:30 pm. Room Service is particularly suited for patients with decreased appetites; as small meals can be ordered multiple times throughout the day. Menu items can be ordered at any time, such as a breakfast entree at dinner or soup at breakfast, depending on whatever a patient desires at the time. The menu has been revised to include local favorites and gluten-free items. The goal of Food & Nutrition Services is to provide flexible, patient-centered care through this program.