

UConn John Dempsey Hospital

2020 | Annual Cancer Program Report



Table of Contents

2020 Cancer Committee Members	2	Radiation Oncology Facts	15
Cancer Committee Chair - 2020 Review	3	Head and Neck Program in the Neag Comprehensive Cancer Center.....	15
Cancer Liaison Physician 2020 Review	3	Cancer Diagnostics – The Foundation for Treatment Planning	16
UConn Health’s American College of Surgeon’s Commission on Cancer Accredited Cancer Program	4	UConn Health Diagnostic Imaging: The Role in Treating Cancer	16
Cancer Treatment Services	4	High Risk Clinic/Genetic Counseling.....	17
Cancer Care during the COVID-19 Pandemic.....	5	Bone Health Management.....	18
New Faculty Hires.....	5	Patient Navigation Program	19
COC Annual QI Project and Goals.....	6	Survivorship.....	19
Doc Program	7	Cancer Prevention and Early Detection	19
Diagnostic, Supportive, and Complimentary Care Services	8	Dignicap (Cooling Cap system)	20
Multidisciplinary Cancer Conferences (Tumor Boards)..	9	Clinical Trials & Research.....	20
2020 Breast Cancer Program Activity	9	UConn Health’s Cancer Registry	22
Management of Neurologic Tumors	10	The Cancer Data Management Team	24
Thoracic Oncology Program	11	Review of 2019 Cancer Registry Data	24
Cardio-Oncology Program	11		
Bladder Cancer Facts	12		
Prostate Cancer Facts.....	12		
Melanoma Program Facts	13		

2020 Cancer Committee Members

Cancer Committee Chair

Susan Tannenbaum, M.D.
Associate Professor, Medicine
Chief, Division of Hematology/Oncology

Physician Members

Robert Dowsett, M.D.
Chief of Radiation Oncology

Uendra Hedge, M.D.
Chief Medical Oncologist, Melanoma and Cutaneous Oncology;
Head and Neck/Cancer Committee Cancer Registry Quality
Coordinator

Omar Ibrahim, M.D.
Director of Interventional Pulmonary/ Cancer Liaison Physician

Alex Merkulov, M.D.
Associate Professor of Radiology Section
Head of Women's Imaging

Benjamin Ristau, M.D.
Assistant Professor of Surgery
Urologic Oncology

Qian Wu, M.D.
Professor, Department of Pathology and Laboratory Medicine
Director, Surgical and Cytology Services – Chief, Anatomic
Pathology and Autopsy Service

Pramod Srivastava, M.D.
Professor, Department of Immunology
Eversource Energy Chair in Experimental Oncology. Director,
Center for Immunotherapy of Cancer and Infectious Diseases
Director, Carole and Ray Neag Comprehensive Cancer Center

Christina Stevenson, M.D.
Associate Professor, Surgery/Breast Program Medical Director

Non Physician Members

Quaratulain (Annie) Ali, MPH, CCRP, MSH
Clinical Research Supervisor/Cancer Committee
Research Coordinator

Devon Bandouveres, MSN, RN, OCN
Oncology Clinical Nurse Specialist

Kerry Coughlin, MS, RD, CSO, CDN
Registered Dietician

Theresa Creamer, MS, RD, CSO, CDN
Registered Dietician

Kimberly Cubeta-Gileau, P.T.
Rehabilitation Services Coordinator

Jessica Santos-Martinez
Breast Program Administrative Coordinator

Carolyn Guarino, MSN, RN
Quality Assurance Specialist

Lisa Holle, Pharm.D., BCOP, FHOPA
Associate Clinical Professor/Department of Pharmacy
Practice/Cancer Committee QA Coordinator

Caroline Leary
Cancer Registry Data Technician

Sarah Loschiavo, APRN, FNP-C, ACHPN
Program Director of Oncology
Supportive Services

Douglas Hackenyos, Pharm.D., BCOP
Pharmacy Department Clinical Coordinator

Darlene Price-Wood, BS, RHIT, CTR
Cancer Registry Manager

Ellen Shaw, MBA, MSN, RN, OCN
Interim Nursing Director Clinical Services - Oncology

Jennifer Swoop, M.S., L.G.C.
Licensed Genetic Counselor

Wendy Thibodeau, MSN, RN, OCN
Nurse Navigator/Cancer Committee Cancer
Conference Coordinator

Wanita Thorpe, MBA
Cancer Center Administrative Director/Cancer
Program Administrator

Marie Ziello, LCSW
Department of Social Work/Cancer Committee
Psychosocial Coordinator



Cancer Committee Chair 2020 Review

UConn Health continues to be proud of its' American College of Surgeon's Commission on Cancer (ACoS-CoC) accredited Academic Comprehensive Cancer Program. We are one of the oldest continuously ACoS-CoC accredited cancer programs in the nation after successfully becoming accredited in July 1977; and successfully passing ACoS-CoC's rigorous triennial surveys to maintain that designation since then. ACoS-CoC is recognized nationally as one of the leading cancer program standards of care setters validating that a facility provides or facilitates patient access to state of the art cancer diagnostics, cancer treatment, and the necessary supportive care services to enable cancer patients to achieve the most optimal clinical outcomes possible. Additionally, as an ACoS-CoC accredited cancer program UConn provides onsite genetic counselling and testing services, as well as access to the latest clinical trials, and research programs available either onsite or in collaboration with our community clinical partners. After completing clinical cancer care our patients matriculate on to our survivor's program. More information about ACoS-CoC can be found at <https://www.facs.org/quality-programs/cancer/coc/about>

Our program is staffed by physician's board certified in surgical specialties, medical oncology, radiation oncology, urologic oncology, gynecologic oncology, dermatology, endocrinology, neuro-surgery, neurologic oncology, pathology, diagnostic radiology, interventional radiology, pulmonology, and palliative care medicine. Enhancing the medical staff are advanced practice nurses, and physician assistants, oncology certified nurses, board certified oncology pharmacists, certified clinical research professionals registered dietitians, board certified genetic counselors, licensed clinical social workers, professionals expert in cancer prevention and early detection, palliative care professionals, and registered nurse navigators who shepherd and mentor patients, and their families from cancer diagnosis through survivorship. Dedicated interdisciplinary



Susan H. Tannenbaum, M.D.

teams meet regularly in our cancer program sponsored multidisciplinary cancer conferences to discuss and customize patient cancer care. Cancer care services are available at the Carole and Ray Neag Comprehensive Cancer Center and throughout the UConn Health System

We remain passionate in ensuring high quality holistic cancer care for our patients. In 2020 the cancer program continued to improve its Thoracic Oncology Program with a new interventional bronchoscopy platform Monarch™ with new diagnostic capabilities, its' Division of Neurosurgery/Neuro-Oncology partnership with the Duke Preston Robert Tisch Brain Tumor Center, growth of our Cardio-oncology program, Survivorship program within our growing Supportive Care Services, as well as its' National Accreditation Program for Breast Centers (NAPBC) accredited Breast Program.

For more information contact The Carole and Ray Neag Comprehensive Cancer Center UConn Health 263 Farmington Avenue Farmington, CT 06030 Monday thru Friday 8:00 to 4:30 AM, 860-579-7822 <https://health.uconn.edu/cancer/about/overview/>

Susan H. Tannenbaum, M.D.,
Associate Professor, Medicine
Chief of the Division of Hematology and Oncology at UConn
Medical Director Carole and Ray Neag Comprehensive Cancer
Cancer Committee Chair

Cancer Liaison Physician 2019 Review

The Commission on Cancer (COC) was established in 1962. Since that time, the role of the Cancer Liaison Physician (CLP) has grown. The foundation and fundamental goal is to ensure that the cancer program is reaching standard of care and perpetually improving the program within.

The use of real time data from the National Cancer Data Base (NCDB) allows the program to compare benchmarks, patient demographics and treatment modalities regionally and across the country. The Rapid Quality Reporting System (RQRS) dashboard also allows us to ensure that active patients meeting benchmarks during their treatment phase of care.

Lastly, the Cancer Program Practice Profile Reports (CP³R) Version 3 outcomes reports provides a review of standards that are set forth by COC and allows us to compare data from year to year.

I was appointed to the position of CLP in 2016, since that time we have taken the opportunity to not only improve our rates of compliance in the treatment standards but also provide additional information to key care providers to improve patient care. Most recently, we reviewed the Chart Audit for Epithelial Ovarian Cancer Treatment

Ovarian cancer is the most deadly of the gynecologic malignancies in the United States. Primary treatment is critical to achieving optimal outcomes through care by a gynecologic oncologist. In our institution, charts were collected for patients with invasive epithelial ovarian cancer from 2016-2018. Forty-one patients were identified for review. Seven patients were excluded from analysis due to declining care or different histology (stromal tumor, lymphoma, borderline tumor). Each patient's chart was reviewed for diagnosis, initial treatment, stage, and referral for genetic counseling. 100% (34/34) of patients received care within the NCCN guidelines. These guidelines are frequently updated, so it is important to review this type of information in real time as we treat patients. Our practice compulsively uses evidence-based care to treat our patients, which incorporates the most updated literature to formulate treatment plans.

As the Cancer Liaison Physician at the Neag Comprehensive Cancer Center, I look forward to delivering providers the tools to ensure exceptional care in the years to come.

Omar Ibrahim, M.D.
Assistant Professor of Medicine
Director, Interventional Pulmonary
Cancer Liaison Physician



Omar Ibrahim, M.D.

UConn Health's American College of Surgeon's Commission on Cancer Accredited Cancer Program

UConn Health has maintained a continuously accredited American College of Surgeon's Commission on Cancer (ACoS-CoC) cancer program since 7/1/1977, and has one of the oldest continuously accredited ACoS-CoC approved cancer programs in the nation. ACoS-CoC is nationally recognized as the premier cancer therapeutic standard setter and serves as endorsement that a facility servicing cancer patients is providing cancer diagnostics, treatment, and supportive care services of the highest quality. It also requires that all the facility's patients have access to the latest clinical trials and genetic counseling and testing services either onsite or via referrals. The UConn cancer program is approved as an **Academic Comprehensive Cancer Program (ACAD)**. Our cancer program's ACoS-CoC accreditation serves as public validation that each of the UConn' medical providers who care for cancer patients are committed to the holistic patient care approach necessary to produce optimal outcomes for the patients they treat. Our physician providers include board certified surgical specialists, medical oncologists, radiation oncologist, urologists, gynecology-oncologist, dermatologists, endocrinologist, neurologic-surgeons, pathologists, diagnostic radiologists, pulmonologists, and palliative medicine specialists. Rounding out the medical staff are oncology certified nurses (OCN), board certified oncology pharmacists (BCOP), certified clinical research professionals (CCRPs), registered dietitians, board certified genetic counselors, licensed clinical social workers, professionals expert in cancer prevention and early detection, and palliative care professionals. Multidisciplinary teams will navigate patients and their families through their cancer experience from diagnosis through survivorship. Cancer services are provided at the **Carole and Ray Neag Comprehensive Cancer Center** and through-out the UConn Health Systems.

Our commitment is to growing our service lines with continual focus on improving the services that meet our patients' needs. In 2018 the UConn cancer program implemented many new services and initiatives to do that. This includes a partnership with UConn's Division of Neurosurgery which collaborates with the Preston Tisch Brain Tumor Center at Duke to provide care for patients with central nervous system tumors (brain and spine). Our Breast Cancer Program was successfully re-accredited by the National Accreditation Program for Breast Centers (NAPBC). NAPBC certifies that premier standards of care are available to patients diagnosed with breast cancer and other diseases of the breast. We expanded our multidisciplinary prospective treatment planning cancer conference menu to include a conference dedicated to the management of musculoskeletal cancers (see complete list of multidisciplinary conferences on page 16) In addition to new clinical services many supportive services have been added to address the psychological and emotional well-being of our patients and their families.

For more information, contact:
Carole and Ray Neag Comprehensive Cancer Center
UConn Health
263 Farmington Avenue
Farmington, CT 06030
Monday thru Friday 8 a.m. to 4:30 p.m. 860-579-7822
health.uconn.edu/cancer

Cancer Treatment Services

- Bile Duct Cancer
- Bladder Cancer
- Bone Health
- Bone Marrow Transplant
- Brain Cancer
- Breast Cancer
- Cervical Cancer
- Colon Cancer
- Endocrine Neoplasia
- Endometrial Cancer
- Thyroid, Pituitary, Adrenal
- Gall Bladder Cancer
- Head and Neck Cancers
- Hereditary Cancers
- Kidney Cancer
- Leukemia
- Liver Cancer
- Lung (Thoracic) Cancer
- Lymphoma
- Multiple Myeloma
- Oral Oncology
- Ovarian Cancer
- Pancreatic Cancer
- Pediatric Cancer
- Prostate Cancer
- Radiation Oncology
- Reconstructive (Plastic) Surgery
- Rectal Cancer
- Sarcoma
- Skin Cancer
- Stomach (Gastric) Cancer
- Testicular Cancer
- Uterine Sarcoma
- Vaginal Cancer
- Vulvar Cancer

Surgical Services

- Breast
- Colorectal
- Dermatology
- General
- Gynecology
- Hepatobiliary Surgery

- Minimally Invasive and Robotic Surgery with the *da Vinci® Surgical System*
- Neurosurgery
- Oromaxillary
- Otolaryngology, Head and Neck
- Plastic
- Reconstructive Surgery
- Thoracic Surgery
- Urologic Surgery
- Vascular

Systemic Services

- Chemotherapy
- Immunotherapy
- Biotherapy

Radiation Oncology Services

- 3D Conformal Radiation Therapy
- Brachytherapy - High Dose Rate (HDR)
- Brachytherapy - Low Dose Rate (LDR)
- Computerized Treatment Planning
- Electron Beam
- External Beam Radiation Therapy
- HDR Radiation Therapy System
- Hyperthermia
- Image-Guided Radiation Therapy (IGRT)
- Intensity Modulated Radiation Therapy (IMRT)
- Linear Accelerator
- Proton Beam
- Radiosurgery to Treat Brain Tumors
- Robotic Radiosurgery System
- Selective Internal Radiation Therapy (SIRT)
- Systemic Radioisotopes

Cancer Care During the COVID-19 Pandemic

The COVID-19 pandemic has brought overwhelming challenges to the health care systems in Connecticut, the United States, and the World. Cancers do not wait for pandemics to cease. Cancer patients are not only at increased risk for serious adverse events secondary to COVID-19 infection but often require ongoing treatment and interaction with the health care system and have great fears of disease progression or recurrence with any interruption of their care.

Has this pandemic interrupted cancer care?

The answer varies depending on whether you are in a COVID-19 hotspot or in an area where infection is present but not overwhelming the health care system. As a general rule, visits in person have been reduced dramatically with a move to virtual

visits by telemedicine. Patients therefore feel seen and heard with little interruption in routine follow-ups. Routine screening of follow-up radiology tests like CT scans have been deferred for several months. New patients continue to be seen, in person or virtually, where a determination of the need to start treatment is made.

If treatment is required, central venous catheter placement also may be deferred as the operating room is used only for urgent or emergent cases. As COVID-19 inpatients on ventilators increase, operating rooms are closing to make space and equipment available to patients in need. Our learners, medical students, residents and fellows, are not routinely part of elective care any longer. Hence we are finding other ways to continue their educational needs. This is being done to protect them from exposure as well as free them up for other health care needs at this time.

Has this Pandemic interrupted cancer care at the Neag Comprehensive Cancer Center?

At the Neag Comprehensive Cancer Center at UConn we are still treating most if not all patients that require treatment. We are changing therapies to reduce hospital visits including transitioning to oral therapies, increasing time between treatments, reducing the intensity of treatments when possible and giving more growth factor support to reduce the patients' susceptibility to infection. Clinical trials have been put on hold in terms of routine visits and testing although treatments on these trials continue. We are protecting a core staff to remain as safe as possible to be available to continue to see and treat these patients. Since our staff interact with patients from the outside world daily, we reduce risks to them by having no visitors allowed in with patients during visits, consultations and their infusions. Additionally patients must wear masks while being seen and treated, not easy to do for hours on end. This creates increased emotional strain for the patients. A cancer patient's physical health is as important as his/her emotional care. Our supportive services teams are busy and involved with the staff to try to make the patient's experience in this very frightening time more "normal".

In general, at the Neag Comprehensive Cancer Center at UConn, we have been able to maintain care with the support of our administrative leadership as well as our community which sends us masks, food and letters of thanks. We continue to maintain an environment of care and concern as well as safety for our cancer patients.

Susan Tannenbaum, M.D.

Chief, Division of Hematology/Oncology, Department of Medicine Service Chief, Carole and Ray Neag Comprehensive Cancer Center



Ritika Vankina, M.D.

New Faculty Hires in 2020

Dr. Ritika Vankina joined the Neag Comprehensive Cancer Center this summer after completing her Fellowship from Harbor-UCLA Medical Center in June 2020. Dr. Vankina says she chose UConn Health because of our excellent supportive care services and dedication to serve patients with integrity and scientific aptitude. She will specialize in coagulation disorders and

also has special interest in Hematological malignancies as well as sarcomas. Outside of work, she enjoys traveling especially visiting



Victoria Forbes, M.D.

as many national and state parks as possible, cooking and meditation.

Dr. Victoria Forbes joined the Neag Comprehensive Cancer Center last month after completing her Fellowship in Hematology and Oncology at Dartmouth-Hitchcock. Dr. Forbes was a medical student, resident, and Chief Resident right here at UConn Health. She is thrilled to return to UConn and to her family in her home state of Connecticut. Dr. Forbes will see malignant and benign Hematology patients in clinic. She is passionate about Global Oncology and teaching and looks forward to bringing a Global Oncology program to our Cancer Center. Outside of work, she enjoys dancing, hiking, and exploring the world.



Tarunya Vedere, M.D.

Dr. Tarunya Vedere joined the Neag Comprehensive Cancer Center in August 2020 after completing her Endocrinology Fellowship from the University of Virginia Medical Center in July 2020. She trained at UConn for her Internal medicine residency and decided to return to the area to pursue her interest in Endocrine Neoplasia. She will spend time seeing patients in both the Endocrine Neoplasia clinic as well and the Endocrinology clinic. Outside of work, she enjoys travelling, cooking and going on long hikes with her family.



Judith Cooney, M.D.

Dr. Judith “Judy” Cooney has joined our Supportive Services team in the Neag Comprehensive Cancer Center as a Health Psychologist, seeing patients and families dealing with the effects of cancer and its treatment and developing staff support programs. In this position, she will also integrate the education of students and residents. Judy joins us from the Newington VA, where she has developed and served as Director of several clinical programs, including the Substance Abuse Day

Program, the Comprehensive Smoking Cessation Program, the Integrated Substance Abuse-Tobacco Program, the Employee Smoking Cessation Program, and Rapid Access Primary Care-Smoking Cessation Program, and the Health Psychology Program. Over the past year, pertinent to the position she will have here at UConn Health, Dr. Cooney has been a Psychologist in the Psycho-Oncology Clinic at the VA.

2020 Nightingale Award Winners from the Neag Comprehensive Cancer Center:

- Genice Nelson, APRN, DNP, New England Sickle Cell Institute, Program Director
- Jennifer Kozikowski (Zelek), RN, Neag Comprehensive Cancer Center, CNII

CoC Annual QI Projects and Goals

Quality Improvement Initiatives

Study Title: Integration of Palliative Care for Stage IV Lung Cancer Patients

Problem: ASCO recommends that all stage IV cancer patients receive a referral to an interdisciplinary palliative care team early in their course of disease. At UConn Health, it has been documented that only 28% of stage IV cancer patients receive a referral to the palliative care team, for stage IV lung cancer specifically, 42% of patients were referred for palliative care. The goal is to get 80-90% of patients a referral to palliative care team within 8 weeks of stage IV diagnosis or if diagnosed outside of UConn within 8 weeks of first appointment at UConn Health. Anticipated timeline for completion of this QI initiative is Dec 2020.

Source of Problem Identification: Stoute T, et al. Assessing the appropriate utilization of the palliative care service by the Carole and Ray Neag Comprehensive Cancer Center at UConn Health. J Clin Oncol. 2018;30:144.

QI Initiative Team Members: Sarah Loschiavo, APRN (Patient Support Services and Palliative Care Program Director); Lisa Holle, Pharm.D. (CC Quality Improvement Coordinator), Carolyn Guarino (RN Quality Assurance Specialist/ CC QI liaison)

Performance Improvement Tool: PDSA (plan, do, study, act) – develop the workflow for this new referral process to palliative care. Attached.

Analysis of Data: In process – see status below

Results: In process-see status below

Comparison to National Benchmark/Guideline: Ferrell BR, Temel JS, Temin S, et al. Integration of palliative care into standard oncology practice. American Society of Clinical Oncology Guideline Update. J Clin Oncol. 2016;35:96-112 recommend that stage IV patients should receive a referral for palliative care within 8 weeks of diagnosis; assumption is that all patients (100%). Our current practice falls well below this national guideline recommendation.

Intervention Implemented: To be determined.

Results of Implemented Intervention: To be determined.

Planned Next Steps: To be determined.

Status: Ongoing. Completed our PDSA (see attached); Completed a retrospective review within EPIC of total # of Stage IV lung cancer patients referred to palliative care during this time period (Jan 1 2020-July 31 2020): 8 Stage IV patients with palliative consult/28 Stage IV patients = 32%. This serves as our baseline data for implementation of a Best Practice Advisory (BPA) recommending referral to palliative care team. The BPA has been created and is in the queue for review/approval by Clinical Decision Support committee. Once BPA is in place, written education for the thoracic oncology providers will be provided, including reviewing the best practice guidelines. Six-month post BPA implementation a retrospective review within EPIC of total number of Stage IV lung cancer patients referred to palliative care will be completed for comparison and analysis.

Cancer Program Goal

Specifics (describe goal): Develop and implement an oral anticancer medication program based on 2019 QI improvement project (4.7 Improving adherence to recommended laboratory monitoring and adherence assessment in patients receiving oral anticancer therapies)

Measurable (how will you measure goal for completion): Measured by process implementation date and follow-up study evaluating adherence to recommended laboratory monitoring and adherence assessment

Achievable (how will you attain goal): Andrea Moran, Lead clinical APRN, Lisa Holle, Pharm.D., and Carolyn Guarino will work with Beacon team and Cancer Center Administration to create the program, which includes development of oral anticancer treatment plans (currently not in use by all providers) which allows for appropriate laboratory monitoring and adherence assessment, consent process and policy, and patient education to be in compliant with national guidelines (Nuess MN, et al. 2016 Updated American Society of Clinical Oncology/ Oncology Nursing Society chemotherapy administration safety standards, including standards for pediatric oncology. *Oncol Nurs Form.* 2016;44:A1-A13).

Realistic (how is it relevant, what results can realistically be achieved): It is relevant to our program as we've noted a deficiency with in comparison with national guidelines (above).

Timely (when the results can be achieved): Program complete by December 2020

Status (includes progress, road blocks or next steps): Ongoing. We have created 1) a workflow for oral anticancer treatment plans; 2) standard build plan for oral anticancer treatment plans and combination oral/IV cancer treatment plans; 3) in process of revising the flowsheet that incorporates key components of monitoring oral anticancer treatments; 4) clarified cancer history will now pull in formation on oral anticancer treatments. Next steps are to finalize flowsheet and outstanding standard build items and begin to review existing oral anticancer treatment plans for any edits and identify new ones that need to be built providing Beacon team with required info to create; 2) then will work on next steps (consent, education, clinic etc).

Other Ongoing Quality Initiatives in Cancer Center - recommend to report on all quality projects ongoing in Cancer Center at each meeting

1. Biosimilars

- Biosimilars committee under P&T to develop process for incorporating biosimilars into UConn Health's formulary led by Doug Hackenyos (Oncology Pharmacy Clinical Coordinator) and Gillian Kuszewski, Pharm.D.(Clinical Coordinator); transitioned to using pegfilgrastim, bevacizumab, filgrastim, rituximab, and trastuzumab biosimilars for all new patients. Plan is to consider conversion to trastuzumab biosimilars for existing patients for later this summer.
- Evaluation of efficacy/safety of pegfilgrastim, bevacizumab and trastuzumab biosimilars and innovator product (IRB approved, PI, Lisa Holle)

2. Medical Marijuana Outcomes study

- IRB approved retrospective review of patients receiving medical marijuana in GI/GU clinic and reported outcomes
- PI: Lisa Holle, Pharm.D.

3. Oral Anticancer Therapy process improvement

- Abby Luke is working on QI improvement project to identify mechanisms for improvement in oral anticancer therapy with lenalidomide regimens

4. Improve focus on body image distress in breast cancer patients undergoing surgery and/or reconstruction

- Plan developed, survey to be created to give to new patients exploring concerns related to body images and psychosocial distress then develop targeted interventions
- Led by Marie Ziello and Nancy Baccarro

DoC Program

The UConn Health Cancer Center continues to provide high level, multidisciplinary cancer care to patients in the custody of the Department of Correction (DoC) despite the recent challenges associated with the COVID-19 pandemic. We conducted 47 E-Visits in FY 2020 in an effort to maintain patient safety and the safety of our staff during the pandemic. There were 383 outpatient hematology/ oncology appointments, including physician consultations and treatment visits. There were 159 cancer directed treatments, including chemotherapy, immunotherapy and supportive care administered on MS5, in addition to various oral cancer therapies for which we follow patients. We welcomed Emily Hsu, M.D., Hematology Oncology Fellow, to our team as of January 2020. We appreciate the care provided by the MS5 team to these patients, both in the inpatient and outpatient setting.

Thank you,
Pragna Kapadia DO

Diagnostic, Supportive, and Complimentary Care Services

Histology

- Full-service laboratory
- Routine surgical pathology
- Routine oral pathology
- Routine and complex special stains: IHC and IF
- Turnaround time
 - o Surgical and Oral Pathology (routine) - 24 hours
 - o Verbal reports given on rush basis and include unexpected or malignant results

Electron Microscopy

- Nerve, tumors, skin and platelets can be processed
- An out-of-paraffin workup may be helpful for diagnosis
- Turnaround time
 - o Electron Microscopy - 48 to 72 hours

Cytology

- Full-service diagnostic laboratory
- ThinPrep® and conventional Paps and Reflex HPV testing
- One-vial Pap testing with microbiology laboratory
- Fine needle aspiration
- Non-gynecologic specimens
- ThinPrep® imaging system
- Extensive quality assurance program
- Access to three board-certified cytopathologists for questions and interpretations
- Turnaround time
 - o Cytology - 48 hours

Oral and Maxillofacial Pathology Biopsy Service

The only oral pathology biopsy service in Connecticut, this service reviews approximately 4,300 diagnostic specimens annually. Board-certified oral pathologists provide oral diagnostic services based on the latest research and innovations in health care.

- General Dentistry: Comprehensive oral assessment and treatment for cancer patients requiring urgent dental care in the Advanced Education in General Dentistry (AEGD) clinic. Clinical trials are available, including studies focused on oral mucositis, a common side effect of cancer treatments
- Oral and Maxillofacial Radiology: Dental and oral imaging for assessment and diagnosis of dental conditions that occur before and after cancer treatment
- Prosthodontics: Prosthetic reconstruction of oral defects resulting from cancer surgery performed in the prosthodontic clinic

Oncology Supportive Care Service

Palliative care is a medical specialty that focuses on improving quality of life and comfort to those with serious, chronic, or end-of-life illnesses. The field has become vital in the fight against COVID-19, for patients and health care workers alike.

The dedicated supportive (palliative) care team at the Carole and Ray Neag Comprehensive Cancer Center at UConn Health realized their specialty was a scarce resource during the pandemic, so they jumped in to help. “We wanted to offer our expertise to staff, patients, and families quickly,” says Sarah Loschiavo, APRN/Director of Supportive Care. They formed the Inpatient Supportive Care Team, which consists of Loschiavo; Nancy Baccaro, Surgical Oncology APRN; Maria Ziello, Oncology Social Worker; Patty Newman, ICU Social Worker; and Katy Wilcox, Hospital Chaplain.

Read more: <https://today.uconn.edu/2020/05/uconn-health-role-supportive-palliative-care-covid-19-pandemic/>

The interdisciplinary Supportive Care Service celebrated its 4th year integrated within the Neag Comprehensive Cancer Center with significant growth. Olga Nesta, APRN, NP-C joined the Supportive Care team providing palliative care consultations, ongoing management and support to patients

across the disease trajectory. Judith “Judy” Cooney, Ph.D. is an experienced health psychologist focused on modifying health behaviors associated with cancer risk, evaluation and treatment of psychological issues related to cancer and its treatment, and providing cancer survivorship support and counseling. Alexis Ludwig, M.S., R.D., CD-N works with oncology teams to identify patients who are at high risk for malnutrition or significant weight loss and works with those patients to maintain their nutritional status during treatment. Stephanie Gonzalez is a Community Health Specialist helping to support cancer patients and their families throughout the entire cancer care continuum at UConn Health and in the community. Our service aligns with evidence driven national clinical practice guidelines recommending supportive care concurrent with oncology care at any point during cancer treatment or beyond. Our weekly interdisciplinary team meetings coordinate patient care to provide optimal multidimensional care to patients and families. Palliative & Supportive care educational lectures and preceptorship opportunities have provided enrichment opportunities for UConn students and staff members.

- The service celebrated its 4th year integrated in the Neag Comprehensive Cancer Center.
- Over 150 patients seen and followed on the palliative/supportive care consult service.
- Consistent program growth over the last 4 years with increased integration of services to meet the physical, psychosocial and social needs of our patients.
- Sarah Loschiavo, APRN/Program Director obtained recertification as an Advanced Certified Hospice and Palliative Nurse (ACHPN®)
- Marie Ziello, LCSW received the PAWS award for consistently performing above and beyond.
- Presenters for various educational opportunities including the Cancer Education Series, Hem/Onc Fellow Lecture Series, UConn Nursing School, UConn Medical School interprofessional education in palliative care.
- Team based Quality Improvement Project entitled “Improving palliative care integration for Stage IV Lung Cancer patients at UConn Health to align with the American Society of Clinical Oncology best practice guideline by initiating a Best Practice Advisory (BPA) in EPIC.”
- Supportive Care team presence at tumor boards, Breast Leadership Committee and weekly Supportive Service Interdisciplinary team meetings.
- New donation site for Quilts that Care which is a charitable organization focusing on wrapping cancer patients with hope and support by providing handmade quilts.
- Social Work completed a quality improvement program aimed at offering patients education and assistance with Advance Directives to over 90 patients.
- Social Work completed a quality improvement program aimed at offering patients education and assistance with Advance Directives to over 90 patients

Multidisciplinary Health Cancer Conferences (Tumor Boards)

The UConn cancer program convenes seven specialty multidisciplinary cancer conferences annually. Multidisciplinary cancer conferences also known as tumor boards are physician directed conferences where multidisciplinary medical teams and allied health care professionals discuss the diagnosis and treatment options of cancer patients. These conferences serve as an augmentation to the formal interdisciplinary consultation process and expedites the development and implementation of the patient's personalized treatment plan. Participants now earn CMEs for attending these conferences.

List of Conferences

Breast
Gastrointestinal
Genitourinary
Gynecology-Oncology
Hematopoietic
Lung
Melanoma
Molecular Tumor with JAX labs

2020 Breast Cancer Program Activity

2020 Breast Cancer Program Activity Breast Program

Our Breast Program received a Three-year Accreditation from the National Accreditation Program for Breast Centers (NAPBC) after the site visit in 2018. NAPBC Accreditation is the seal of approval for the UConn Health Neag Comprehensive Cancer Center from the American College of Surgeons and formally acknowledges our commitment to providing the highest quality evaluation and management of our patients with breast disease. Our next accreditation was scheduled for 2021. Due to the COVID-19 pandemic, all programs due for an accreditation site visit in 2021, 2022, and 2023 will be extended one full year from their original site visit due date pushing our site visit to 2022.



Christina E. Stevenson, M.D.
F.A.C.S.

the seal of approval for the UConn Health Neag Comprehensive Cancer Center from the American College of Surgeons and formally acknowledges our commitment to providing the highest quality evaluation and management of our patients with breast disease. Our next accreditation was scheduled for 2021. Due to the COVID-19 pandemic, all programs due for an accreditation site visit in 2021, 2022, and 2023 will be extended one full year from their original site visit due date pushing our site visit to

Breast Cancer Care during the COVID-19 Pandemic

The COVID-19 pandemic has created new challenges and tribulations in health care. We have implemented new protocols, guidelines, and processes to ensure the safety of our patients and staff during this difficult time. The peak of this wave seems to have passed, but COVID-19 is not gone. We must maintain vigilance in our effort to resume normal operational practice. As other parts of UConn Health move forward to reopen services, the Neag Comprehensive Cancer Center has been open and busy, continuing to treat patients. In an effort to continue to provide high-quality care to our special patient population, we will monitor things closely as volumes in the institution increase in other areas. Patients getting procedures or receiving chemotherapy and immunotherapy for the first time, all need COVID-19 tests within 48 hours prior to treatment to make sure they are safe to administer to. Patients traveling from facilities require a

higher level of oversight if they are coming for treatments. We are getting creative to meet the needs of our patients in this new world of health care. Telehealth technologies have allowed us to continue to stay connected with our patients during these turbulent times and will continue to be utilized as we progress into the future of health care.

Breast Cancer Support Group

The Breast Cancer Support Group at UConn Health allows young breast cancer survivors to engage with other women who have "been there" and understand the challenges that a breast cancer diagnosis brings into everyday life. The target population is women under the age of 46 with non-metastatic breast disease. The group meets the 3rd Thursday of every month at 7pm with an average of about five women who attend. Due to the current situation with the COVID-19 pandemic, the Breast Cancer Support Group has changed their format to zoom meetings.

Community Breast Navigation in the Greater Hartford Area Outreach Program

At the beginning of the year, our Community Health Specialist participated in a Health and Wellness event at Hartford Public Library, and also gave a presentation on breast health education at Universalist Church in West Hartford. Unfortunately, the COVID-19 closures limited our access to members of the community but that did not stop our Breast Community Specialist from continuing our work of educating women and helping them set up their annual mammograms. Although she has not been able to engage our UConn Health patients in person at our satellite offices in East Hartford and West Hartford since mid-March, while working remotely, she has found a creative way to still make contact. Using Care Everywhere, she's made approximately 150 calls to women, educating them on breast health and the importance of knowing your status. Women were still reluctant during the months of March through May, but in June, as things began to open back up, women began to feel more comfortable scheduling their mammograms. Even with the challenges of COVID-19, she was able to educate over 200 women on breast health, and scheduled over 80 mammograms. In addition to this, a fun educational video was created to ensure that we don't miss a beat with our community outreach efforts despite challenges presented by COVID-19. The videos will be shown in numerous areas of the campus and will also be distributed by some of our community partners via their websites.

In an effort to track the economic and mental impact COVID-19 has had on our patients, we have developed a phone survey with specific questions targeting the needs of our patients. We have helped many families to date, connecting women with the needed resources in our community. We will continue our part to ensure all families we make contact with feel we have met them where they are.

Linda Clemens Breast Cancer Foundation Philanthropic Funding

The Linda Clemens Breast Cancer Foundation is a local non-profit organization funded through private donations. From

the very start, their mission and sole objective has been to assist Connecticut women, men and their families who have been affected by breast cancer. Thanks to the generosity of their supporters, they have been able to fund programs at many area hospitals and cancer centers like UConn Health that assist un- or under-insured breast cancer patients with services including early detection through mammography, diagnosis with biopsies, and treatment and post-op recovery with compression garments and in-kind assistance initiatives. Throughout the year, they create and distribute Chemo Care Bags to area infusion centers containing items that are particularly useful during chemotherapy treatment. This past June the Linda Clemens Breast Cancer Foundation presented UConn Health with a \$7,500 donation in gift cards to support our patients through the COVID-19 pandemic. They are a 100% volunteer grassroots organization comprised of only seven extremely dedicated board members. Nearly all of the money they raise supports the breast cancer programs they have created allowing them the unique ability to directly impact patients and their families within our community.

- Care from nationally recognized experts and an accomplished and experienced medical team.
- Today's most sophisticated technologies including 3D genius mammography (Tomosynthesis) and 3D automated ultrasound at the Beekley Imaging Center with same day readings in a comfortable spa-like environment.
- Experienced supportive care services including lymphedema therapy, nutrition, reproductive endocrinology and infertility, survivorship care planning, and a support group.
- Access to today's most promising clinical trials to enhance care.
- Unique services to address all of your concerns, such as the Cancer Fatigue Clinic to help patients manage fatigue during treatment.

High Standards of Care – National Breast Cancer Care Quality Measures		
Treatment Guidelines	Expected Performance Rate	UConn Health Rates*
BCSRT - Radiation is administered within 1 year (365 days) of diagnosis for women under the age of 70 receiving breast conservation surgery for breast cancer	90%	97%
HT - Tamoxifen or third generation aromatase inhibitor is recommended or administered within 1 year (365 days) of diagnosis for women with AJCC T1c or stage IB-III hormone receptor positive	90%	100%
MAC - Combination chemotherapy is recommended or administered within 4 months (120 days) of diagnosis for women under 70 with AJCC T1cN0, or stage IB - III hormone receptor negative breast cancer	90%	100%
MASTRT - Radiation therapy is recommended or administered following any mastectomy within 1 year (365 days) of diagnosis of breast cancer for women with >= 4 positive regional lymph nodes	90%	100%

High Standards of Care – National Breast Cancer Care Quality Measures		
Treatment Guidelines	Expected Performance Rate	UConn Health Rates*
nBx - Image or palpation-guided needle biopsy to the primary site is performed to establish diagnosis of breast cancer	80%	86%

*Overall Rates Per Commission on Cancer's Cancer Program Practice Profile Reports

*These quality rates are from the most current rates posted in CoC's Rapid Quality Reporting System. Other rates are from the last posted rates in CoC's Cancer Program Practice Profile (CP3R) Reports

Management of Neurologic Tumors

The diagnosis of brain and spine tumors carries devastating implications for patients and their families. Oftentimes these tumors change the very essence of an individual. At UConn Health/University of Connecticut, these patients can be reassured that they have hope for personalized and innovative treatments second to none. Through a holistic approach, our neuro-oncology program aims to optimize patient outcomes while also being a constant resource for families. Through this arises perpetual hope, an essential and fundamental ingredient for optimizing outcomes.

The frequency of brain and spine tumors, whether primary or metastatic continues to increase. In an effort to address the needs of these patients, the Division of Neurosurgery at UConn Health/University of Connecticut has embarked upon an unprecedented and comprehensive initiative to provide the most innovative as well as personalized approach to patients with these devastating diagnoses. With investments in state-of-the-art technology and the establishment of multidisciplinary patient tailored team care, everything is done to optimize patient surgical/medical care and outcomes focused on quality of life. In addition to the cranial expertise already developed at UConn Health as well as new neurosurgery hires with specific oncology interests we have built a team of specialists that together provide extraordinary care for these patients. As an example, Dr. David Choi brings to us fellowship training expertise in spinal oncology and we also recently recruited Dr. Kevin Becker from the Yale School of Medicine and Brain Tumor Program to further bolster our expertise in the medical management of patients with brain and spine primary tumors and metastatic disease. It is through these efforts that we have now established an incredible team of experts that provide world class treatment of these patients.

We have made progress on our two major initiatives thus far; the first is the fostering and development of a collaboration with the Duke Medical Center' world renowned. Through this collaboration, the UConn Health Division of Neurosurgery is collaborating with the Preston Robert Tisch Brain Tumor Center at Duke for the co-management of UConn Health's brain tumor patients. This important relationship will provide UConn Health's tumor patients access to very specialized tumor treatments available at Duke. UConn Health and Duke envision the surgical treatment, if needed done by the neurosurgery team at UConn Health with evaluation for

additional treatments by Dr. Henry S. Friedman's team at Duke's Preston Robert Tisch Brain Tumor Center: (<https://today.uconn.edu/school-stories/uconn-teams-duke-brain-tumor-care/>). Dr. Kevin Becker, who started with us this year will be an important liaison to strengthen and further develop this relationship. The second is a collaboration with Jackson Laboratories to sequence brain and spine tumors, for those patients in whom there may be few options other than standard of care treatment and allow us to personalize the management of these rare tumors which has been shown to improve survival in some tumor types. We furthered our efforts by establishing the first UConn Health/JAX genomics tumor board which was held on August 24, 2019 and we will continue this unique opportunity to collaborate with the Jackson Lab group to enhance patient care. The tumor biorepository has been a valuable source of tissue in collaboration with translational researchers as we try to further improve treatment options.

Kevin P. Becker M.D., Ph.D.
Assistant Professor of Neurosurgery/Neuro-Oncology,
and Neurology
Director of Neuro-Oncology Program
Department of Surgery

Ketan R. Bulsara, M.D., MBA
Professor and Chief, Neurosurgery
Department of Surgery

Thoracic Oncology Program

UConn Health like many institutions provides a multidisciplinary approach to lung cancer care, but our approach is vastly different from most institutions.

At the Neag Comprehensive Cancer Center, our approach is designed around the patient, not the provider. Our tumor board, nodule clinic, thoracic oncology and radiation oncology clinics collaborate simultaneously in order to allow patients one visit to UConn Health and to expedite their care.

Our state of the art facility provides the latest in innovative diagnostic equipment. This includes, but is not limited to, endoscopic ultrasound technology and a hybrid operating room, which provides real time images during biopsies. These modalities allow us to condense diagnosis with the staging into a same day procedure. We were the first robotic bronchoscope platform (Auris Monarch Platform) in the New England area and have been doing procedures since February of 2019. Presently with more than 100 cases performed. This technology has allowed us to extend the boundaries in thoracic oncology, leading to an earlier diagnosis. We are now the only hospital in New England performing robotic bronchoscopy and cone beam imaging which provides the highest accuracy possible for our patients in challenging biopsies.

While our technology is the best in the area, perhaps our most valuable asset is our superb staff and our pathways for patients that allow for efficient and expedited care. We are fortunate to have exceptional people like Dr. Electra Kaloudis to help identify patients at risk with UConn Health's Low Dose Screening and Sarah Loschiavo, APRN who leads the way with supportive services.

Our patient centered care and service has shifted our stage of diagnosis to 43% for stage I disease. This is treated by surgery or radiation therapy with curative intent.

Surgically we offer services from a dedicated thoracic surgeon who specializes in robotic surgery to allow our patients minimally invasive and cutting edge innovative treatment options. While the last year has been challenging from a public health standpoint due to the COVID-19 pandemic, our program has been and always will be committed to providing exceptional care to our patients.

Omar Ibrahim, M.D.
Assistant Professor of Medicine
Director of Interventional Pulmonary and Thoracic Oncology/
Cancer Liaison Physician

Cardio-Oncology Program

Cardiovascular (CV) disease is the leading cause of death in the U.S., followed closely by cancer. Until recently, these diseases were thought of as independent entities. However, CV disease is a significant cause of morbidity and mortality in patients who are actively undergoing, or have completed, cancer treatment. Not only can cancer therapy result in both acute and delayed CV toxicities, but poor CV health can affect the ability to tolerate cancer treatment, thus affecting cancer outcomes and survivorship. Optimizing a patient's CV health prior to receiving cancer treatment is one of the major goals of a cardio-oncology clinic. This is accomplished by managing their pre-existing heart condition and by modifying their CV risk factors. In our cardio-oncology program, we offer the following services:

- 1) surveillance of cardiac function in patients receiving cardiotoxic chemotherapy;
- 2) prevention and management of cardiotoxicity;
- 3) risk stratification of patients who are scheduled to receive cardiotoxic chemotherapy; and
- 4) Reduction of CV risk in patients and survivors of cancer. With the growth of this program, cancer survivors' major concerns of disease and treatment-related injury to their future health can be addressed.

We have a strong research program which includes projects listed below:

1. Investigation of biomarkers, myocardial strain imaging, and assessment of diastolic function in the early detection of cardiotoxicity.
2. Hypertension control in cancer survivors
3. Radiation induced heart disease

Agnes S. Kim, M.D., Ph.D. Associate Professor of Medicine
Director of Cardio-Oncology Program
Director of Noninvasive Cardiac imaging and
Echocardiography Lab

Bladder Cancer Facts

What is Bladder Cancer?

Bladder cancer is the fourth most common cancer among men and the eighth most common among women in the United States. In 2018, more than 81,000 cases of bladder cancer will be diagnosed and 17,000 people will die from this disease. Bladder cancer arises from cells that line the inside of the urinary bladder called urothelial cells, and most bladder cancers are termed urothelial cancers for this reason.

Are there risk factors for bladder cancer?

The most common modifiable risk factor for bladder cancer is a history of cigarette smoking. Carcinogens from tobacco smoking are filtered by the kidneys and excreted in the urine. Because urine is stored in the bladder until we are ready to urinate, these carcinogens come in contact with the bladder lining and increase the risk of bladder cancer.

Other modifiable risk factors include occupational exposures such as certain organic chemicals and aromatic amines used in the dye industry. Recently, the diabetic medication pioglitazone (trade name Actos) was linked to an increased risk of bladder cancer.

Non-modifiable risk factors such as age, sex (bladder cancer is more common among men), chronic bladder infections, and certain genetic conditions (e.g. Lynch syndrome) also increase the chances of developing bladder cancer.

What are the symptoms of bladder cancer?

The most common symptom of bladder cancer is painless blood in the urine (also called hematuria). Other symptoms include irritative voiding symptoms such as urinary frequency and urgency. These latter symptoms tend to be more common among women.

How is bladder cancer diagnosed?

The first step in bladder cancer diagnosis is a cystoscopy. Cystoscopy is an office procedure where a small scope – akin to a catheter with a camera at the tip – is inserted through the urethra to examine the bladder. If a bladder tumor is seen, the next step is a transurethral resection of bladder tumor (TURBT). This is an outpatient procedure typically performed under general anesthesia in which the bladder tumor is removed in a minimally invasive fashion through



Benjamin T. Ristau, M.D., M.H.A.

the urethra. There is no cutting or sewing of the skin. The goal of a TURBT is to determine whether a bladder tumor has started to invade through the bladder wall (stage) and how aggressive the bladder tumor is (grade).

How is bladder cancer treated?

There are two categories of bladder cancer. Most bladder cancers (~80%) are non-muscle invasive at diagnosis. These “nuisance” tumors are not usually life threatening and typically do not require removal of the bladder. However, non-muscle invasive bladder cancers commonly recur (~50-70% recurrence); therefore, lifelong

surveillance is required. The remaining 15-20% of bladder cancers are muscle-invasive at diagnosis. These are treated with a combination of chemotherapy and surgery (bladder removal and urinary tract reconstruction). Our fellowship-trained urologic oncologist performs bladder removal surgery using either a minimally invasive approach with the da Vinci robotic surgical system or through a traditional open incision. Urinary tract reconstruction is done in a continent (neobladder, Indiana pouch) or incontinent (ileal conduit) fashion.

Benjamin T. Ristau, M.D., M.H.A.
Assistant Professor of Surgery-Urologic Oncology
Cancer Committee Urology Champion

Prostate Cancer Facts

What is Prostate Cancer?

Prostate cancer is the most common solid malignancy among men in the United States with nearly 200,000 cases diagnosed annually. Fortunately, most prostate cancers are slow growing; however, prostate cancer remains the second leading cause of cancer death among American men.

What are Risk Factors for Prostate Cancer?

Prostate cancer becomes more common as men become older. The average age of diagnosis is around 65 years. Black men are more likely to be diagnosed with prostate cancer and often at younger ages compared to Asian-American, Hispanic/Latino, and non-Hispanic white men. Men with a family history of prostate cancer in their father or brothers are at increased risk to develop prostate cancers themselves. Lastly, men with genetic changes in their family such as BRCA1 or BRCA2 (commonly associated with breast, ovarian, and pancreatic cancers) or Lynch syndrome (commonly associated with colon cancers) are more likely to be diagnosed with prostate cancer.

How is Prostate Cancer Diagnosed?

Since men with early prostate cancers rarely have any clinical symptoms, most prostate cancers are suspected based on the elevation of a screening blood test called prostate-specific antigen (PSA). PSA testing has undergone some controversy over the past decade; however, most guidelines recommend PSA testing for men at average risk between the ages of 55 and 69. Men with the above mentioned risk factors may consider PSA screening at an earlier age.

An elevated PSA test does not mean that a man has prostate cancer. The definitive procedure to determine the presence of absence of prostate cancer is called a prostate biopsy. The decision to perform a biopsy is nuanced and is one best addressed through a discussion between you and your urologist.

What Is The Difference Between a Traditional Prostate Biopsy and a Transperineal Prostate Biopsy?

Traditional prostate biopsies were done through the wall of the rectum. They were done this way because the prostate is in close proximity to the rectum and therefore easy to access. However, a major problem with this approach is the risk of a deadly infection called sepsis which occurs in up to 5% of men

undergoing transrectal prostate biopsy. As such, urologists at UConn Health have moved to a transperineal prostate biopsy. Instead of biopsying through the rectum, the biopsy is done through the skin underneath the scrotum. This skin can be sterilized. Since moving to this approach in February 2019, we have done nearly 200 transperineal prostate biopsies with zero infections and cancer detection rates have remained equivalent.

What Happens After I am Diagnosed with Prostate Cancer?

Management of prostate cancer depends on how aggressive the biopsy shows that your individual cancer is likely to be (termed cancer grade) and whether the cancer has spread outside the prostate gland (termed cancer stage). General categories of treatment include active surveillance, watchful waiting, surgical removal of the prostate (robotic prostatectomy), radiation therapy, or hormone therapy. These options are best discussed between you and your urologist or oncologist.

Why Choose UConn Health for Prostate Cancer Care?

UConn Health is fortunate to have a world expert in prostate cancer as its Division Chief (Dr. Peter C. Albertsen) and a fellowship-trained Urologic Oncologist as its Surgical Director of Urologic Oncology (Dr. Benjamin T. Ristau). UConn Health was the first in Connecticut and among the first in New England to offer the safer transperineal prostate biopsy method to men with concern for prostate cancer. As such, you can be sure you will receive a state-of-the-art opinion regarding your prostate cancer diagnosis in a compassionate and caring environment.

Benjamin T. Ristau, M.D., MHA Assistant Professor of Surgery-Urologic Oncology Committee Urology Champion

Melanoma Facts

Melanoma Report: 2019-2020

Cutaneous melanoma is the fifth most commonly diagnosed cancer in the United States that arises from epidermal melanocytes of the skin. Exposure to ultraviolet light is the most well studied carcinogen and excessive sun exposure without protection is a risk factor. The incidence of melanoma has increased rapidly in the last 30 years and its rate of increase in incidence is fastest in man and woman age 50 years and over while incidence is stable in younger people. Although Caucasian population with fair skin are at the highest risk, increasing incidence is also reported in Hispanics, blacks and Asian population. In 2019, in the United States of America, about 96,480 new invasive melanoma cases will be diagnosed (57,220 in men and 39,260 in women) with estimated death from melanoma of about 7230 people.

The incidence of melanoma in Connecticut is about 25-30 cases per 100,000 population and amongst highest in the Country. At UConn Health, melanoma represents the largest number of cancer cases seen among cancer diagnosis comprising between 20-30 patients a month. Significant proportion of these patients are of older age requiring particular attention due to their limited resources. Majority of melanoma cases are diagnosed in early stages reflecting the success of surveillance program at UConn Health.. Also, significant number of patients at high risk of recurrence are diagnosed providing opportunities for effective interventions to reduce risk of recurrence (adjuvant treatment). Patients

diagnosed with disseminated melanoma receive state of the art treatment in a multidisciplinary setting resulting in improved survival and quality of life.

National trends in survival of patients diagnosed with melanoma show effectiveness of newer treatments based on recent advances in anti-melanoma immune therapy as well as success of drugs used to target mutated BRAF gene. The current statistics suggest that the death rate from melanoma is decreased by 2% in patients over 50 years of age and 4% in patients under 50 years.

Melanoma program at UConn Health is pioneered around a comprehensive theme that incorporates emphasis on prevention, early diagnosis and education. Patients diagnosed with high risk and disseminated melanoma are offered cutting-edge treatment that include treatment of melanoma affecting brain and spinal cord. Neag Comprehensive Cancer Center at UConn Health provides comprehensive management of melanoma patients through collaboration with multiple disciplines and engaging in both clinical and basic research as discussed below:

1. A multidisciplinary melanoma clinic: Incidence of cutaneous melanoma in Connecticut is amongst the highest in the country with prevalence of between 25-29 cases per 100,000. UConn Health serves as a reliable referral center for diagnosis and risk stratification of newly diagnosed cutaneous melanoma leading to effective treatment selection.
2. Melanoma tumor board: has helped bring together experts in dermatology including Moh's surgeons, melanoma surgery, radiation therapy, and medical oncology for optimal management of patients diagnosed with cutaneous melanoma. The melanoma program prides itself by its multidisciplinary team approach consisting of experts equipped with a melanoma tumor board that facilitates accurate assessment of melanoma risk and stage as per American Joint Committee on cancer that is critical to develop a consensus and peer reviewed plan of melanoma treatment
3. Advanced melanoma tumor board: A new advanced melanoma tumor board is held once a month to review patients diagnosed with advanced melanoma and assess their plan of care and progress on treatment.
4. Melanoma outreach program in the community: Every year volunteers from dermatology provide education and screening services to residents of communities around UConn Health where awareness of melanoma is prioritized leading to emphasis on early diagnosis and surveillance to prevent complications in patients.
5. Melanoma education: Every patient diagnosed with invasive cutaneous melanoma receives an extensive education about the disease, its histogenesis, risk factors and prognostication leading to risk stratification of the tumor and treatment decisions. This practice leads to patient empowerment and compliance for melanoma surveillance plans and promote personalized treatment decisions in patients based on potential benefits, risks and toxicity of available treatment modalities.

6. Genetic counselling services: Melanoma patients identified in the clinics to be at high risk of carrying inherited melanoma are offered genetic counseling services so as to risk of melanoma to the patients and their family. The expertise helps provide services to the selected patients and their family leading to development of a surveillance plan for prevention and early diagnosis of melanoma and related cancers.

7. State of the art treatment for patients diagnosed with high risk and metastatic melanoma: Transitioning from the traditional high dose interleukin-2 and bio-chemotherapy based immune approaches to the present cutting edge new generation immune therapy based on inhibitory anti-melanoma T cell checkpoint blockade as well as novel targeted therapy, Melanoma Program at UCONN has seen vastly improved outcomes in patients. The growing experience in newer immune therapies has helped incorporate safety mechanisms to deal with autoimmune side effects associated with this treatments.

8. Outcome statistics following incorporation of immune based treatment of melanoma: Our success with emerging immune based treatment of melanoma is evident from our treatment outcomes in melanoma patients compared to the era before new treatment was introduced.

9. Multidisciplinary management of metastatic melanoma: The surgical expertise at UConn Health attracts a vast referral base from the community physicians of patients requiring surgical management. Additionally, melanoma patients requiring surgical management to complement medical treatment or improve quality of care, receive expert treatment from novel surgical approaches available at UConn Health. These include surgical procedures to address melanoma metastasis to the spine and brain available through our highly rated Spine Center and Neurosurgery department. Additionally, the state of the art radiation treatment program provides opportunities for pain management as well as non-invasive radio-surgery approaches to treat brain melanoma metastasis complementing neurosurgical needs as well as emerging immune based treatments of melanoma. These services are critical to optimizing treatment outcomes of melanoma patients leading to improved survival and quality of life in patients through a truly multi-disciplinary approach under one roof.

10. Melanoma in the older population: Since older patients are at highest risk of developing and dying from cutaneous melanoma and its complications, efforts are directed towards better understanding biology of melanoma with aging and interaction between aging associated weakening of immune system (immune-senescence) and melanoma in older patients. To this end, we are gaining experience of treating older melanoma patients through our insights both in the clinics and in the laboratory. Management of autoimmune toxicity, an important side effect associated with immune checkpoint inhibitory treatment of melanoma require participation in patient care from multiple medical specialties. To that end, we have expanded collaborative relationships with multiple medical specialties at UConn Health that help mitigate autoimmunity and achieve safety goals in patients undergoing treatment.

11. Pain and palliative care program and social services: provide critical needs of patients diagnosed with metastatic melanoma helping with quality of life and supportive services for patients.

12. Melanoma laboratory research: Melanoma program is actively engaged in understanding T cell function of patients undergoing melanoma treatment in relation to tumor microenvironment. To this end we have developed an active collaboration with basic immunology laboratories in UConn and Jackson laboratory to study anti-melanoma T cell activity, its regulation and profile of generated cytokines. Our findings are providing basis of outcomes in older melanoma patients following immune checkpoint inhibitor treatment that is corroborated by others. Tumor tissue is deposited in tissue bio-repository facility of UConn Health after patient's consent for access to relevant research in future.

13. Melanoma clinical trials: We have partnered with Memorial Sloan Kettering Hospital to examine the relevance of tumor mutation burden in melanoma patients receiving immune checkpoint inhibitor treatment. Additionally, we are preparing for novel clinical trials that examine the role of combining immune checkpoint inhibitor treatment with melanoma vaccines derived from patient's own melanoma tumors. The tumor vaccines have been prepared by careful scrutiny of their genetic footprints that predicted high capabilities by sophisticated bioinformatics platforms. Additional studies are under consideration to test newer agents in melanoma patients failing standard immune checkpoint inhibitor treatment.

14. Melanoma presentation at the national meeting and publications resulting from clinical research:

Hegde U*, Holmes A, Cucka B, Masternak S, Stevenson C. Outcome of metastatic melanoma following immune checkpoint inhibitor treatment by tumor infiltrating lymphocytes of primary cutaneous site. Proceedings of the 56th Annual Meeting of the American Society of Clinical Oncology 2020; May 29-June 2, Chicago, IL. *Journal of Clinical Oncology*. 38,(Suppl; e22005).

Holmes A*, Wang X, Swede H, Hegde U. Influence of age and cancer history on prevalence of autoimmunity in patients with metastatic melanoma: A large retrospective study. Presented by the first author in the Medical Student/Resident Forum Category at the 56th Annual Meeting of the American Society of Clinical Oncology; 2020, May29-June 2, Chicago IL. (Due to the COVID-19 pandemic, the research findings were presented as a short power point presentation via video conference, that was screen shared with ASCO attendees. The attendees constituting the national audience asked questions and provided feedback in the form of comments about the research. Abstract is published in the Proceedings of the 56th Annual Meeting of the American Society of Clinical Oncology 2020; May 29-June 2, Chicago, IL. *Journal of Clinical Oncology*. 38, (Suppl; abstr e22016).

Kethireddy N, Thomas S, Bindal P, Shukla P, Hegde U*. Multiple autoimmune side effects of immune checkpoint inhibitors in a patient with metastatic melanoma receiving Pembrolizumab. Accepted for publication. *Journal of Oncology Pharmacy Practice*. 2020. doi: 10.1177/1078155220921543.

Submitted by: Upendra P. Hegde, M.D. Associate Professor of Medicine Medical Oncologist, Co-Director Melanoma and Cutaneous Oncology Program; and Head and Neck Cancer/Oral Oncology Program. Cancer Committee Quality Coordinator

Co-Leaders of Melanoma Program: Dr. Phil Kerr, M.D., Dr. Jane Grant-Kels, M.D. Dr. Christina Stevenson, M.D.

Radiation Oncology Facts

The Radiation Oncology Department offers a wide range of services including a complete array of external beam and brachytherapy techniques. We have an active Intensity Modulated Radiation Therapy (IMRT) program with comprehensive Image Guided Radiation Therapy (IGRT) capabilities, including the use of the Accuray Tomotherapy system. We routinely use respiratory (motion) management techniques for thoracic, upper abdominal and breast applications using a sophisticated optical laser system (C-RAD Corporation). These motion management techniques allow for more accurate radiation delivery, with reduced radiation exposure to normal adjacent tissues. We were early adopters of respiratory management techniques for breast radiotherapy using Deep Inspiration Breath Hold (DIBH) which significantly reduces cardiac exposure for left sided breast treatment.



Robert Dowsett, M.D.

In addition we have a robust stereotactic radiosurgery and stereotactic radiotherapy program for intracranial and body applications.

Our brachytherapy program is active in gynecologic tumors and also breast applications with the use of catheter based Accelerated Partial Breast Radiation (APBI).

Our Nuclear Medicine and Radiology Departments are active in the use of Selective Internal Radiation (SIRT) for liver tumors and systemic radionuclides for multiple applications.

Robert Dowsett, M.D. Chief of Radiation Oncology Cancer Committee Radiation Oncology Champion

Head and Neck Program in the Neag Comprehensive Cancer Center

Head and neck cancer represent group of cancers that arise in the epithelium of the oral cavity, oropharynx, hypopharynx and larynx. This year, an estimated 65,410 people (48,000 men and 17,410 women) will develop head and neck cancer. It is estimated that 14,620 deaths (10,980 men and 3,640 women) from head and neck cancer will occur this year. Majority of the tumors are squamous cell carcinomas, while tumors arising from the submucosal salivary glands of the head and neck tumor sites represent less than 5%. Traditionally caused by smoking and alcohol use, an emerging trend of association with High-Risk Human Papilloma Virus (HR-HPV) is linked to sexual lifestyles of patients exposing oral epithelial cells to the virus.

While the incidence of smoking associated head and neck cancers have continued to decline due to the success of smoking cessation programs, HR-HPV related head and neck cancers are emerging to be a growing problem. Typically seen in the non-smoking population in the age group of 45-60, smoking history complicates the natural history and biology of these tumors resulting from additional genetic mutations associated with smoking. Testing the tumors in the oropharynx for HR-HPV has become important due to the clinical relevance of this biomarker.

At UConn Health, the head and neck cancer program attracts patients diagnosed with head and neck cancers from around the state for its long experience and multidisciplinary approach. The patients are typically seen together in a clinic that meets twice a month with Ear Nose Throat surgeon, radiation therapy and medical oncology experts. The combined approach helps to provide independent input from all three specialties so as to determine tumor characteristics, stage and develop optimal management in patients. Eligible patients are offered newer treatments through clinical trials made available through the Neag Comprehensive Cancer Center.

The multidisciplinary head and neck cancer team is ably supported by a very elaborate team critical to the success of treatment of patients diagnosed with head and neck cancers. The supportive care team brings in the expertise from dental surgery, oral medicine, nutrition, speech therapy, social work, pain and palliative care and experienced nursing staff. Those requiring psychologic support are referred to the psychiatrist who is available for patients in need. The multidisciplinary approach helps provide state of the art treatment to patients diagnosed with head and neck cancer that include surgery, chemo-radiation and sequential treatment. Patients diagnosed with recurrent head and neck cancers are offered standard of care and clinical trials.

The program also provides expertise in management of patients diagnosed with thyroid gland cancer and rare tumors arising from the paranasal sinuses.

Clinical Trials: We participated in MK 3475 (Keynote -048) study examining role of combining anti PD-1 agent Pembrolizumab to chemotherapy in patients diagnosed with recurrent head and neck cancers stratified by tumor PD-L1 status. The results of this study has led to FDA approval of anti PD-1 agent either alone or in combination with chemotherapy in patients diagnosed with recurrent or metastatic head and neck cancers stratified by their PD-L1 status.

Targeted therapy: A patient with recurrent adenoid cystic carcinoma with lung metastasis was initiated on a treatment with AKT inhibitor agent Ipatasertib based upon tumor detection of a mutation in a gene called AKT (AKT e17K). The patient has completed one year on this treatment and is closely monitored for efficacy as well as side effects. The drug was provided by the manufacturer Genentech pharmaceutical company upon request and approved by the FDA for single patient use.

Research study: In collaboration with Dr. Kourosh Parham from the department of ENT at UConn Health, we have initiated a research study examining effects of chemotherapy drug on hearing in patients diagnosed with head and neck cancer receiving chemotherapy and radiation therapy. Eligible patients with head and neck cancer will be offered this research study that will examine levels of a protein called Prestin in the blood and monitor it as a biomarker of damage to hearing apparatus in the inner ear. Goal is to understand mechanisms of ear toxicity following chemotherapy and its early diagnosis in patients so as to prevent further damage.

MK-7902 Protocol 010: A new clinical trial is underway in 2020 for patients newly diagnosed with recurrent or metastatic head and neck cancer. The study is a phase 3, placebo controlled blinded clinical study of anti PD-1 agent Pembrolizumab with or without Lenvatinib – a multiple kinase inhibitor agent. The study will assess safety and efficacy of this combination as a first line treatment of recurrent or metastatic head and neck cancer patients compared to anti PD-1 alone.

Quality Improvement Project: Patients diagnosed with oropharyngeal squamous cell carcinoma have high likelihood of HR-HPV association. HPV associated oropharyngeal squamous cell carcinoma demonstrate dramatic responses to systemic therapy and resulted in improved outcomes in patients. These findings have resulted in down-staging of head and neck tumors by HR-HPV status and required treatment outcomes to be linked to HR-HPV status of oropharyngeal tumors. The findings have led to clinical research inquiry into de-escalation strategies of HR-HPV associated head and neck tumors as compared to the traditional smoking associated tumors. Additionally, survivorship plans in patients treated for HR-HPV associated tumors require emphasis on sexual lifestyle modifications. New clinical trials have stratified patients by the HR-HPV status resulting in guidelines by American Society of clinical Pathology to require HR-HPV status in newly diagnosed patients with oropharyngeal tumors.

Since oropharynx represents most likely site of HR-HPV association, testing for non-oropharyngeal head and neck cancers for HR-HPV is not required. This helps appropriate use of resources in diagnosing HPV association of oropharyngeal cancer. Although multiple methods are available for this testing, tumor cell expression of p16 and detected by immunohistochemistry is considered a standard approach in diagnosis.

In a collaborative quality improvement study we examined the prevalence of testing of HR-HPV in tissue specimens obtained from patients diagnosed with oropharyngeal cancer between 2008-2017, we found that our testing prevalence was much below the required number.

These findings have led to recognize challenges in testing of tumors for HR-HPV and efforts in improving testing of this virus in our Hospital involving Surgery and Pathology services. The quality improvement project was presented at the National Quality Care Symposium held in San Diego September 6-7, 2019 and led to improvement in testing for HPV in oropharyngeal squamous cell carcinoma.

Upendra P. Hegde, M.D.

Associate Professor, Department of Medicine
Chief Medical Oncologist, Melanoma and Cutaneous Oncology;
and Head and Neck Cancer/Oral Oncology

Cancer Diagnostics – The Foundation For Treatment Planning



Qian Wu M.D., MS

The department of pathology is integral to the function of the cancer center at UConn Health. It's critical at the time of biopsy or surgical accrual to accurately and in a timely fashion collect and process specimens. As part of this, Pathology has created a research biorepository for fresh frozen tissue to be utilized in basic and clinical research at UConn Health and elsewhere. As our new electronic medical record, HealthOne was installed; it transformed reporting of all pathology cancer diagnosis to a format called the synoptic report. The synoptic report follows current CAP (College of American Pathologists) Cancer checklist and Protocol guidelines which not only makes our pathology reporting more universal and translatable to other institutions, but also ensures compliance with the American College of Surgeons Commission on Cancer as a quality assurance measure.

As part of the multidisciplinary team for Cancer care, our pathologists review, present, and discuss the pathologic diagnosis and implications for every patient.

- Participates in multidisciplinary tumor boards
- Banks in the biorepository tumor, non-tumoral tissue and blood from consented patients for future research
- Provides fresh samples through the biobank coordinator for ongoing trials
- Supports collaborative research with colleagues in the cancer center.

Qian Wu M.D., MS
Professor of Pathology and Laboratory Medicine
Chief of Anatomic Pathology
Cancer Committee Pathology Champion

UConn Health Diagnostic Imaging – The Role in Treating Cancer

Cancer is the second leading cause of death in the United States after heart disease. It can manifest in more than 200 different forms and attack almost any cell in the human body. Cancer has an expansive reach with nearly everyone who has been touched by this deadly disease in some capacity.

Diagnostic imaging and interventional services play a critical role in initial cancer diagnosis, treatment planning, and palliative therapies through interventional techniques and cancer monitoring.

UConn Health Radiology brings world-class expertise and cutting-edge technology together to provide you with

comprehensive, accurate, and safe imaging. Our board-certified radiologists and expert staff provide exceptional, compassionate care. Our health care professionals have expertise in thoracic disease, breast imaging and intervention, neuroradiology, musculoskeletal imaging and body and pelvis MRI. Patients benefit from our collaborative approach with providers and the unique nature of our academic medical center where doctors, scientists, and researchers work to advance health and medicine every day.

UConn Health Beekley Imaging Center News and Innovation 2020

On the Forefront of Innovation with Low Dose Mammograms: Mammography is necessary for screening for early signs of breast cancer. Most women usually don't look forward to their mammogram and for most it's uncomfortable. But what if your mammogram decreased the amount of time in compression and cut the radiation dose in half while capturing clearer images? UConn Health is proud to be on the forefront of innovation in women's imaging by offering the latest FDA approved technology with low dose mammography to diagnose breast cancer.

Early detection is the best defense you have against breast cancer. Since 2007, breast cancer death rates have been steady in women younger than 50, but have continued to decrease in older women. From 2013 to 2017, the death rate from breast cancer decreased by 1.3% per year.

These decreases are believed to be the result of finding breast cancer earlier through screening and increased awareness, as well as better treatments.

What is the best test to diagnose cancer?

There is no single test that alone can accurately diagnose cancer. A complete evaluation of a patient is usually required with a thorough history and physical examination, laboratory tests and diagnostic imaging. Effective imaging, along with laboratory tests, can confirm the presence of cancer, monitor disease progression, and help evaluate the effectiveness of treatment. UConn Health offers the latest state-of-the-art cancer diagnostic imaging technology, which includes x-ray imaging, ultrasound, CT, MRI, and PET/CT.

How is diagnostic imaging used for cancer treatment?

Diagnostic imaging is the process of producing anatomic images of the human body systems and organs. Imaging is used to:

- Detect cancer
- Determine whether the cancer has spread to other parts of the body
- Assess the effectiveness of a cancer treatment plan
- Identify re-staging of an existing cancer
- Imaging is also used when performing biopsies and other surgical procedures

What screening and wellness testing is offered at UConn Health?

- Breast Cancer Screening

- Cardiac (Heart) Screening
- Carotid Artery Screening
- Colorectal Cancer Screening
- Lung Cancer Screening

What are the subspecialties for diagnostic radiologists at UConn Health?

Radiologists, through extensive clinical work and related research, specialize in one or more radiology subspecialties, which include:

- Breast imaging
- Thoracic and Cardiovascular Radiology
- Emergency Radiology
- Gastrointestinal (GI) Radiology
- Genitourinary (GU) Radiology
- Head and Neck Radiology
- Musculoskeletal Radiology
- Neuroradiology
- Pediatric Radiology
- Interventional Radiology
- Nuclear Radiology

UConn Health Diagnostic Radiology is committed to providing outstanding patient care. Our team of medical professionals conducts more than 30,000 studies each year, maintaining the highest standards of clinical excellence provided in a compassionate, caring environment. If you or a family member would like to have your diagnostic radiology services done at UConn Health, simply talk to your doctor when the referral is made.

Alex Merkulov, M.D.

Associate Professor of Radiology

Section Head of Women's Imaging

Cancer Committee Diagnostic Radiology Champion

High Risk Clinic – Genetic Counseling

In 2020, UConn Health and the Neag Comprehensive Cancer Center launched a new High Risk Cancer program, with the ultimate goal of decreasing the morbidity and mortality of cancer through personalized risk assessment and individualized management plans.

This program will be led by a team, with Dr. Dana Scott M.D., who specializes in Breast Health and Cancer Genetics and our Genetic Counselors; Jennifer Stroop and Connor Linehan. They both have specific experience in evaluating and screening patients at an elevated risk for cancer and those at an elevated risk for pathogenic cancer-related mutations. While the core of the program will be made up of those patients who are concerned for their future risks of cancer based on factors such as family history and exposures, we will also provide services for those patients

whose own history of cancer may raise concern for underlying hereditary cancer mutations. Our hope is that we will be able to work collaboratively with some of UConn Health's top physicians to develop individualized management plans based on personal, familial, and genetic information. Genetic counseling and testing services are provided by our two genetic counselors with the Neag Comprehensive Cancer Center's High Risk Cancer Program. Our program follows recommendations from the National Comprehensive Cancer Network for hereditary cancer risk assessment.

What is Genetic Counseling?

This comprehensive service includes reviewing personal and family medical history to better determine cancer risk and the risk that a patient may carry a genetic mutation.

Pre-test counseling typically includes the following:

- Collection of a comprehensive family history
- Evaluation of a patient's cancer risk
- Discussion of the risks, benefits and limitations of genetic testing

Did you know that most cancers are not inherited?

Hereditary cancers are rare. For example, approximately 10% of breast cancers are linked with a mutation (or altered gene) that can run in families. These high-risk families may include individuals with ovarian cancer, pancreatic cancer, and breast cancer diagnosed under the age of 45.

Did you know that genetic testing has changed since 2012?

Patients who had genetic testing prior to 2012, without a known mutation, will often qualify for "updated" genetic testing. Our testing technology has expanded over the years. In 2012, our testing routinely analyzed two genes (BRCA1 and BRCA2). Our current testing technology now includes over 30 rare genes linked to hereditary cancer syndromes.

Did you know that more patients are eligible for genetic testing for hereditary breast and ovarian cancer?

The National Comprehensive Cancer Network (NCCN) recently expanded the criteria for offering genetic testing for hereditary breast and ovarian cancer. Testing criteria now includes the following:

- Personal history of male breast cancer
- Personal history of pancreatic cancer
- Personal history of metastatic prostate cancer
- Personal history of ovarian cancer
- Personal history of breast cancer diagnosed at age 45 or younger

*Family history of any of the above

Genetics can often seem scary and confusing. Our goal is to help translate current technology and information to help empower patients and their families.

We often encourage patients to contact us over the years as information about hereditary cancer changes over time.

We are excited to be working with My Gene Counsel, which creates personalized online updates for patients who have had genetic testing (www.mygenecounsel.com/mgc).

My Gene Counsel, a digital health company that provides innovative genetic counseling solutions, is teaming up with the Cancer Center's High Risk Program to ensure that UConn Health's patients who have undergone genetic testing for cancer predisposition have access to timely and accurate genetic counseling information through the online delivery of My Gene Counsel's Living Lab Reports®.

"Genetics can be overwhelming and confusing, so when a patient leaves my office, I worry about how much information they have retained," said Connor Linehan, MS, LGC, a board-certified genetic counselor for the Hereditary Cancer Program at UConn Health. "Our goal, in partnering with My Gene Counsel, is to increase patient understanding, which in turn encourages appropriate medical follow-up and better health outcomes. The addition of a user-friendly genetic counseling report that patients can review before and after their appointment and over time will be invaluable to empower them to make informed decisions about their health care.

" Read more at: <https://markets.businessinsider.com/news/stocks/my-gene-counsel-partners-with-uconn-health-to-provide-expanded-genetic-counseling-services-1029098896>

Connor Linehan, M.S., L.G.C. Licensed Genetic Counselor
Department of Genetics and Genome Sciences

Jennifer Stroop, M.S., L.G.C. Licensed Genetic Counselor
Department of Genetics and Genome Sciences Cancer
Committee Genetic Counseling Representative

Bone Health Management

The goal of the Cancer and Bone Health Clinic is to offer comprehensive bone health evaluation and treatment to individuals receiving medical therapies for cancer that may increase the risk of bone loss and debilitating fractures such as those of the spine and hip. These includes chemotherapies, immunotherapies and hormonal manipulation for common cancers such as those of the breast, ovary, prostate and lung among others. Full evaluation including imaging and laboratory assessment will be completed, and a comprehensive treatment plan will be devised for each patient.

In addition, patients with advanced cancers that have spread to the bone will be evaluated by a multidisciplinary team for long-term complications of cancer therapies such as Osteonecrosis of the Jaw and Atypical Femoral Fractures.

This year, Dr. Parvathy Madhavan joined our team in September 2020 following her Endocrinology fellowship at UConn Health. She completed her internal medicine residency from Yale New Haven health/Bridgeport Hospital. She splits her time between the endocrine neoplasia clinic, bone health clinic for oncology patients and general endocrinology clinics. Her interests outside of work include art projects with her toddler, reading historical fiction and long walks with her family.

Patient Navigation Program

Patients face multiple issues that can radiate to all areas of their lives when diagnosed with cancer. Navigators at the Neag Comprehensive Cancer Center assess for barriers to care that with early intervention results in timely diagnosis and treatment. Navigators help guide and coordinate patient's care during this very difficult time. The navigation program has 4 nurse navigators. Navigators are assigned to patients either from screening for cancer or at diagnosis through survivorship or end of life care. Navigators provide education, resources, coordination of care and support throughout the cancer continuum. Each year barriers to care are assessed and one is chosen to address by the Nurse Navigators. We just completed a toolkit for the navigators and support staff, if needed, with a list of resources available to share with our patients to assist in overcoming any barriers.

Survivorship

Patients continue to encounter many challenges as they complete their cancer treatment that include physical, emotional, and even financial issues. The survivorship program at the Neag Comprehensive Cancer Center is dedicated to helping cancer survivors live healthy, cancer free lives. It was built to ensure patients have the resources they need to transition to survivorship. Nurse navigators and the patient's oncology team work on putting a survivorship care plan together that includes diagnosis and treatment, follow up plan, late and long-term effects of treatment, and counseling on lifestyle and behaviors that affect their ongoing health. The care plan is reviewed with all patients who have completed primary treatment with curative intent for any stage I-III cancers.

This year, we focused on expanding our survivorship program by creating an embedded multidisciplinary survivorship clinic which will open in the Fall 2020. The Multidisciplinary Survivorship Team will work to educate survivors on prevention, detection and management of complications resulting from cancer treatment, along with focusing on health promotion, cancer prevention and supportive services. During a survivorship visit, patients will be evaluated and counseled by a specialized survivorship team including a nurse practitioner, social worker, registered dietitian and physical therapist. An individualized treatment summary and survivorship care plan with customized recommendations will be created, reviewed with the patient, sent to their providers and visible in EPIC MyChart. Referral based services for cancer survivors will also be provided including: mental health services, health psychologist for lifestyle coaching, genetic counseling, smoking cessation, lymphedema clinics, community resources, financial assistance, cancer support groups, sexual health and specialty providers.

- Successful survivor's day held at the Chowder Pot in Hartford with over 170 patients and families in attendance.

Cancer Prevention and Early Detection

Outcomes of 2020 Activities

Health and Wellness Fair at Hartford Public Library (1/29/2020)

This was a health and wellness event within the community. The community health specialist for both the sickle cell program and breast program met with patients as well as other service providers in the community to discuss the needs of the population as well as services and potential collaboration.

American Society of Hematology (ASH) Research Collaborative Community Engagement Meeting (2/28/2020)

This was a community engagement meeting for the sickle cell patients here at UConn Health. NESCI has been selected as the lead clinical trial site for the ASH Research Collaborative. We held this meeting with our patients to discuss with them the goals of this research collaborative and their options for participating in ASH's clinical trials as well as the benefits.

Common Concerns about Gene Therapy for Sickle Cell with Dr. Biree Andemariam (3/15/2020)

This was a YouTube video posted on Raremark Health's YouTube channel. Dr. Andemariam discussed the common concerns of patients regarding gene therapy as well as some of the effects of gene therapy and what the medical community can do to help patients understand this option.

Gene Therapy for Sickle Cell: When can we expect it? (3/15/2020)

This was another video posted on Raremark Health's YouTube channel. Dr. Andemariam talks about the progress of the early phase clinical trials investigating the effectiveness and effect of treatment and when we can expect that it can be approved as a method of treatment.

Sickle Cell and the Basics of Gene Therapy (3/16/2020)

This was another YouTube video posted on Raremark Health's YouTube channel. Dr. Andemariam breaks down the science behind gene therapy and how it works for sickle cell patients. She walks through how the genetic code of a patient is altered in gene therapy.

SCDAA's Response to the COVID-19 Pandemic (4/8/2020)

This was a webinar hosted by Dr. Andemariam and Dr. Lewis Hsu, the Chief and Vice Chief Medical Officers of SCDAA. They discussed how SCDAA will be responding to the COVID-19 pandemic and how they intend to continue serving their population.

Sickle Cell Disease and COVID-19: What you need to Know (5/18/2020)

This was a Facebook Live event hosted by Dr. Biree Andemariam and Dr. Milford W. Greene of the Sickle Cell Foundation of Georgia. This event was to educate the community on how to navigate and manage their sickle cell disease during the COVID-19 pandemic when regular visits to their primary care physician be limited or less frequent.

Breast Program Virtual Education Series-

The community health specialists have created animated educational videos to display throughout the UConn Health

outpatient clinics, John Dempsey hospital, as well as UConn Health social media pages. Community partners, such as Hartford Public Library and Latino Community Services, Inc. have agreed to highlight these videos on their websites and social media pages as well. These videos will allow the Community Health Specialists to continue their important work of educating and setting up screenings for vulnerable populations in our community.

Dignicap (Cooling Cap system)

We have renewed our contract with Dignitana for the “Cooling Cap” system which aids in hair preservation during chemotherapy treatment. We have replaced our machine with the most up to date technology from Dignitana, which includes personalized caps for patients during their treatments. We encourage all our providers to talk to their patients about this service and/or a Nurse Navigator if you have questions. This service is now available for a variety of tumor types.

Clinical Trials & Research 2020 Report

The Clinical Trials Office within the Carole and Ray Neag Comprehensive Cancer Center is focused on supporting high-quality cancer research and thus help promote better care for cancer patients at UConn Health. The staff consists of qualified, trained and certified professionals who are committed to assisting in the planning, development, implementation, and regulatory oversight of all phases of cancer clinical trials.

The office was created under the Medical Directorship of Pramod K. Srivastava, Ph.D., M.D., and Director of the Cancer Center and provides a dedicated team to enable Cancer Center faculty to bring to UConn Health, innovative treatment options that otherwise would not be available to cancer patients. The Clinical Trials Office actively partners with various cancer cooperative groups, pharmaceutical firms, and other academic centers to bring revolutionary cancer research studies to UConn Health. By supporting clinical research, the office aids UConn Health to meet its goals of excellence in patient care, education, and research. It also engages with other cancer research programs within UConn Health to reach out to the community to educate patients about clinical trials, create awareness on cancer prevention, and increase patient participation in clinical trials.

An early stage Phase I program was recently developed to provide novel treatment options to our patients diagnosed with Stage III/IV cancer. In addition, the clinical trials office has a combination of Phase I-III Pharmaceutical studies and PI-initiated studies available to our patients at UConn Health. We are continuously growing our oncology and sickle cell research program at UConn Health and in the process of opening several Pharmaceutical studies in 2020.

Current Studies Open to Accrual:

Phase 1 Study of Oncolmmunome for the Treatment of Stage III/IV Ovarian Carcinoma (NCT# NCT02933073)

The U.S. Food and Drug Administration (FDA) has approved our Investigational Drug Application for this clinical study at UConn Health for patients with advanced stage (stage III or IV) ovarian cancer. (NCT# NCT02933073). Patients shall receive the standard of care treatment including surgery and chemotherapy, followed by a personalized cancer vaccine, which will be developed for each patient. Blood and cancer samples will be obtained from each patients at the time of surgery, and shall be used to generate and compare the genomic information in each patient’s cancer. Personalized vaccines will be made on basis of the genetic differences between the blood and cancer samples of each patient. The patients shall receive the vaccines by an injection in an outpatient setting, once every month for 6 months.

The study is estimated to enroll a total of 15 patients and currently a total of 7 patients have been enrolled to the Tissue and Blood Phase of the study. Our first patient was enrolled to the vaccine and follow-up phase of the study in November, 2018 and successfully received three doses of the vaccine administration. A total of 2 patients have been enrolled in the Vaccine & follow-up Phase of this study.

To learn more about this study please visit: <https://clinicaltrials.gov/ct2/show/NCT02933073?term=cancer&recrs=ab&cntry=US&state=US%3ACT&city=Farmington&rank=1>

ACF-2, “Identifying Early Clinical & Molecular Markers of Colon Cancer Risks”

ACF-2 is a Principal- Initiated (PI) study that is examining whether environmental and lifestyle-related factors have an effect on how often colorectal cancer occurs. The overall purpose of the study is to collect information and perform tests on the proteins, deoxyribonucleic acid (DNA) and/or ribonucleic acid (RNA) from samples of: aberrant crypt foci (ACF) (commonly occurring areas of non-cancerous colon tissue), polyps (non-cancerous growths that have the potential of turning into cancer), normal colon mucosal tissue (cells lining the colon) and blood. The study will further determine whether the growth of polyps, ACF, and other lesions of the colon are affected by environmental and lifestyle-related factors. In the end, study results may lead to better colorectal cancer screening and to help prevent the development of colon cancer in people who may be at increased risk.

This study is crucial for our colon cancer program at UConn Health and is estimated to enroll a total of 800 patients. Currently a total of 540 patients have been enrolled to this study.

IMR-SCD-102-EXT- A Phase 2 Open-label Extension Study of IMR-687 in Adult Patients with Sickle Cell Anemia (Homozygous HbSS or Sickle-β0 Thalassemia) Who Participated in Study IMR-SCD-102 (NCT04053803)

This global extension study aims to assess the long-term safety and tolerability of IMR-687 in adult patients with sickle cell anemia and previously enrolled in Study IMR-SCD-102. This study is open for enrollment, and 1 patient is enrolled in the study. We are anticipating to enroll

up to 5 patients here at UConn Health.

To learn more about this study please visit: <https://clinicaltrials.gov/ct2/show/NCT04053803>

SPARTAN- A Prospective Phase II, Open-Label, Single-arm, Multicenter, Study to Assess Efficacy and Safety of SEG101 (crizanlizumab), in Sickle Cell Disease Patients with Priapism (SPARTAN) (NCT03938454)

This phase II study aims to evaluate efficacy and safety of crizanlizumab on priapic events in sickle cell disease patients with a history of priapism. The study is open for enrollment, and we are anticipating to enroll a total of 4 patients at UConn Health.

To learn more about this study please visit: <https://clinicaltrials.gov/ct2/show/NCT03938454>

TESARO- FIRST Randomized, Double-Blind, Phase 3 Comparison of Platinum-Based Therapy with TSR-042 and Niraparib Versus Standard of Care Platinum-Based Therapy as First-line Treatment of Stage III or IV Nonmucinous Epithelial Ovarian Cancer (NCT03602859)

This global phase 3 study aims to compare platinum-based standard of care therapy to platinum-based therapy of dostarlimab (TSR- 042) and niraparib of patients with Stage III or IV high-grade nonmucinous epithelial ovarian cancer. This study is open for enrollment and 1 patient is on the study. We are anticipating to enroll a total of 16 patients at UConn Health.

To learn more about this study please visit: <https://clinicaltrials.gov/ct2/show/NCT03602859>

Genentech- A PHASE II, OPEN-LABEL, MULTICENTER, RANDOMIZED STUDY OF THE EFFICACY AND SAFETY OF RO7198457 IN COMBINATION WITH PEMBROLIZUMAB VERSUS PEMBROLIZUMAB IN PATIENTS WITH PREVIOUSLY UNTREATED ADVANCED MELANOMA (NCT03815058)

This global phase II study aims to evaluate the efficacy and safety of personalized cancer vaccine (RO7198457) plus pembrolizumab compared with pembrolizumab alone in patients with untreated advanced melanoma. This study is open for enrollment. We are anticipating to enroll a total of 6 patients at UConn Health.

To learn more about this study please visit: <https://clinicaltrials.gov/ct2/show/NCT03815058>

GUERBET- GDX-44-011 Efficacy and Safety of Gadopiclenol for Body Magnetic Resonance Imaging (MRI) Phase III Clinical Trial – The PROMISE trial (NCT03986138)

This global Phase 3 study is focused on breast cancer patients undergoing a routine Breast MRI. The study is assessing the efficacy & safety of a new investigational contrast agent, gadopiclenol, developed by Guerbet which is not approved by the Food and Drug Administration (FDA). The new product will be compared to another contrast agent, Gadavist® (gadobutrol), which is currently approved by the (FDA). This study is open for enrollment. At UConn Health, we have enrolled 10 patients since November, 2019. We are anticipating to enroll a total of 24 patients at UConn Health.

To learn more about this study please visit: <https://clinicaltrials.gov/ct2/show/NCT03986138>

QCDx study: Determination of the Potential Clinical Utility of the QCDx-br™ Liquid Biopsy Technology to Optimize Treatment Options for Breast Cancer Patients

This pilot study is focused on patients with newly diagnosed (non-metastatic) and metastatic breast cancer patients. The purpose of this study is to determine if QCDx-br™ liquid biopsy test will be an effective tool for finding and further characterizing circulating tumor cells (CTCs) in the blood of patients with breast cancer. At UConn Health, we have enrolled 5 patients since July, 2020. We are anticipating to enroll a total of 60 patients at UConn Health.

Other Studies Opening to Accrual in 2020:

Merck- A Phase 3, randomized, placebo-controlled, double-blind clinical study of pembrolizumab (MK-3475) with or without lenvatinib (E7080/MK-7902) to evaluate the safety and efficacy of pembrolizumab and lenvatinib as 1L intervention in a PD-L1 selected population of participants with recurrent or metastatic head and neck squamous cell carcinoma (R/M HNSCC) (LEAP-010).

The overall purpose of the study is to evaluate the safety and efficacy of pembrolizumab and lenvatinib as 1L intervention in a PD-L1 selected population of participants with recurrent or metastatic head and neck squamous cell carcinoma (R/M HNSCC). The study is estimated to enroll a total of 6 patients for this study and expected to open in October, 2020 at UConn Health.

To learn more about this study please visit: <https://clinicaltrials.gov/ct2/show/NCT04199104>

IMARA- A Phase 2b Study to Evaluate the Safety and Efficacy of IMR-687 in Subjects with Sickle Cell Disease.

The overall purpose of the study is to evaluate the safety and efficacy of IMR-687 in Subjects with Sickle Cell Disease. The study is estimated

to enroll a total of 10 patients for this study and expected to open in October, 2020 at UConn Health.

To learn more about this study please visit: <https://clinicaltrials.gov/ct2/show/NCT04474314>

OncoQuest - A Phase 3, Double-Blind, Placebo-Controlled, Multicenter Clinical Study comparing Chemo-Immunotherapy (Paclitaxel-Carboplatin-Oregovomab) versus Chemotherapy (Paclitaxel-Carboplatin-Placebo) In Patients with Advanced Epithelial Ovarian, Fallopian Tube or Peritoneal Carcinoma.

The overall purpose of the study is to compare the safety and efficacy of four administrations of oregovomab 2 mg IV versus placebo, administered in combination with specific cycles of a standard six-cycle chemotherapy regimen (paclitaxel - carboplatin), for the treatment of subjects with newly diagnosed advanced ovarian cancer who have undergone optimal debulking surgery and are either pending initiation of chemotherapy (Cohort 1 - Primary Surgery) or resumption of another 3 cycles of chemotherapy having completed 3 cycles of neoadjuvant therapy (Cohort 2 - NACT+ Interval Surgery).

The study is estimated to enroll a total of 10 patients for this study and expected to open in October, 2020 at UConn Health.

To learn more about this study please visit: <https://clinicaltrials.gov/ct2/show/NCT04498117>

Chiasma - The Management of Acromegaly (MACRO) Registry

The overall purpose of this study to collect data prospectively on patients with active acromegaly who are being treated or are eligible to be treated with medical therapy (e.g., having an elevated IGF-1). The study is estimated to enroll a total of 8 patients for this study and expected to open in October, 2020 at UConn Health.

Auris Health- Transbronchial Biopsy Assisted by Robot Guidance in the Evaluation of Tumors of the Lung (TARGET trial)

The overall purpose of this study is to evaluate clinical safety and diagnostic accuracy of the robotic assisted bronchoscopy with biopsy performed with the Monarch™ Endoscopy Platform in a broad range of patients with pulmonary lesions. The study is estimated to enroll a total of 60 patients for this study and expected to open in October, 2020 at UConn Health.

To learn more about this study please visit: <https://clinicaltrials.gov/ct2/show/NCT04182815>

The New England Sickle Cell Institute (NESCI) Clinical Research Highlight:

In addition to several sickle cells clinical research trials opened to accrual, NESCI, in an effort to expand their research program, is partnering with the American Society of Hematology Research Collaborative (ASH RC) Sickle Cell Disease Clinical Trials Network (SCD CTN). The ASH RC CTN is a collaborative organization of clinical research sites that will help to bring new and more effective therapies to individuals with SCD. NESCI will serve as the lead clinical trial site in an ASH RC CTN consortium comprised of multiple institutions in the states of Connecticut and Rhode Island. The consortium is a network of four academic medical centers across the states of Connecticut and Rhode Island who care for approximately 1200 individuals with SCD in specialized centers. These centers include UConn Health, Connecticut Children's Medical Center, Yale New Haven Hospital and Rhode Island/Lifespan.

As the lead clinical trial site, NESCI will provide infrastructure, and scientific & administrative expertise to support the overall consortium. Through this collaboration with the ASH RC CTN, our consortium will have access to a large data repository aimed at reducing inefficiencies and increasing understanding of hematologic diseases as well as new clinical trial opportunities. This collaboration is a huge step towards development of a robust New England Sickle Cell Research program at UConn Health.

Pramod Srivastava, Ph.D., M.D. Professor of Immunology and Medicine Eversource Energy Chair in Experimental Oncology Director, Carole and Ray Neag Comprehensive Cancer Center

Quratulain (Annie) Ali, MPH, CCRP, MSHS Clinical Trials Office Supervisor Cancer Committee Clinical Research Coordinator

UConn Health's Cancer Registry

What is a Cancer Registry?

A cancer registry is a standardized data system used to collect, and analyze data on patients treated with cancers and central nervous system neoplastic diseases. UConn Health's Commission on Cancer (CoC)-approved cancer registry database contains clinical and treatment data for patients newly diagnosed at UConn Health or/and treated with all or a portion of first course cancer therapy at UConn Health since January 1, 1989. The cancer registry contains data rich for analysis, and outcomes assessment for 22,371 patients. Post completion of their first course treatment patients are monitored for life. Surveilling patients for outcomes enables providers to measure the effectiveness of the treatments administered, and may help ensure that patients are adhering to their post cancer treatment medical follow-up plans

What Data Are in the Cancer Registry?

Our cancer registry database includes data of patient demographics, social and family history, tobacco usage, primary cancer site, histologic tumor type and grade, cancer stage at diagnosis, cancer site specific prognostic indicators, first course treatment information, and subsequent treatment for patients that might experience recurrent disease/progression, and annual follow-up information including vital status and disease status.

How Are Cancer Registry Data Used?

Hospital Uses – Ensure that cancer therapies are administered in accordance with evidence-based treatment guidelines, and national quality of care standards. The hospital uses cancer registry data to confirm adherence to national quality of care standards and to detect if improvements are needed.

- Monitor UConn patient clinical outcomes.
- Monitor the cancer program's patient population to plan patient services and initiatives.
- Can help Inform planning for research projects, and prevention and screening activities

Connecticut State Cancer Registry – CT state law requires that all CT cancer diagnosing and treating facilities report cancer registry data to the CT state cancer registry. The state registry uses these reported data to measure state-wide cancer prevalence, and the CT state epidemiologists analyze prevalence data to plan statewide cancer education initiatives, and to customize prevention and early detection initiatives, and to targeted communities in effort to reduce/alleviate cancer burdens for all CT residents. The state cancer registries also report de-identified cancer registry data to the Centers for Disease Control's (CDC) National Program of Cancer Registries (NPCR), and some report to the National Cancer Institute's (NCI) Surveillance, Epidemiology, and End Results (SEER) Program. The SEER and NPCR data are the basis for the official federal statistics on cancer incidence, and cancer mortality statistics.

National Cancer Database – The National Cancer Database (NCDB) is a clinical oncology database that is jointly operated by the American College of Surgeon's Commission on Cancer (ACoS-CoC) and the American Cancer Society (ACS). ACoS-CoC accredited hospitals are required to report cancer registry data to the NCDB annually. The data are used to evaluate and track cancer prevalence as well as assess patient treatment patterns, and outcomes. The NCDB also contains many online data tools to assist the CoC cancer programs to use to monitor, and ensure that patients receiving first course treatment are receiving evidenced based treatments in the optimal time frames. Programs can measure their individual performance against local and national performance of other CoC accredited hospitals.

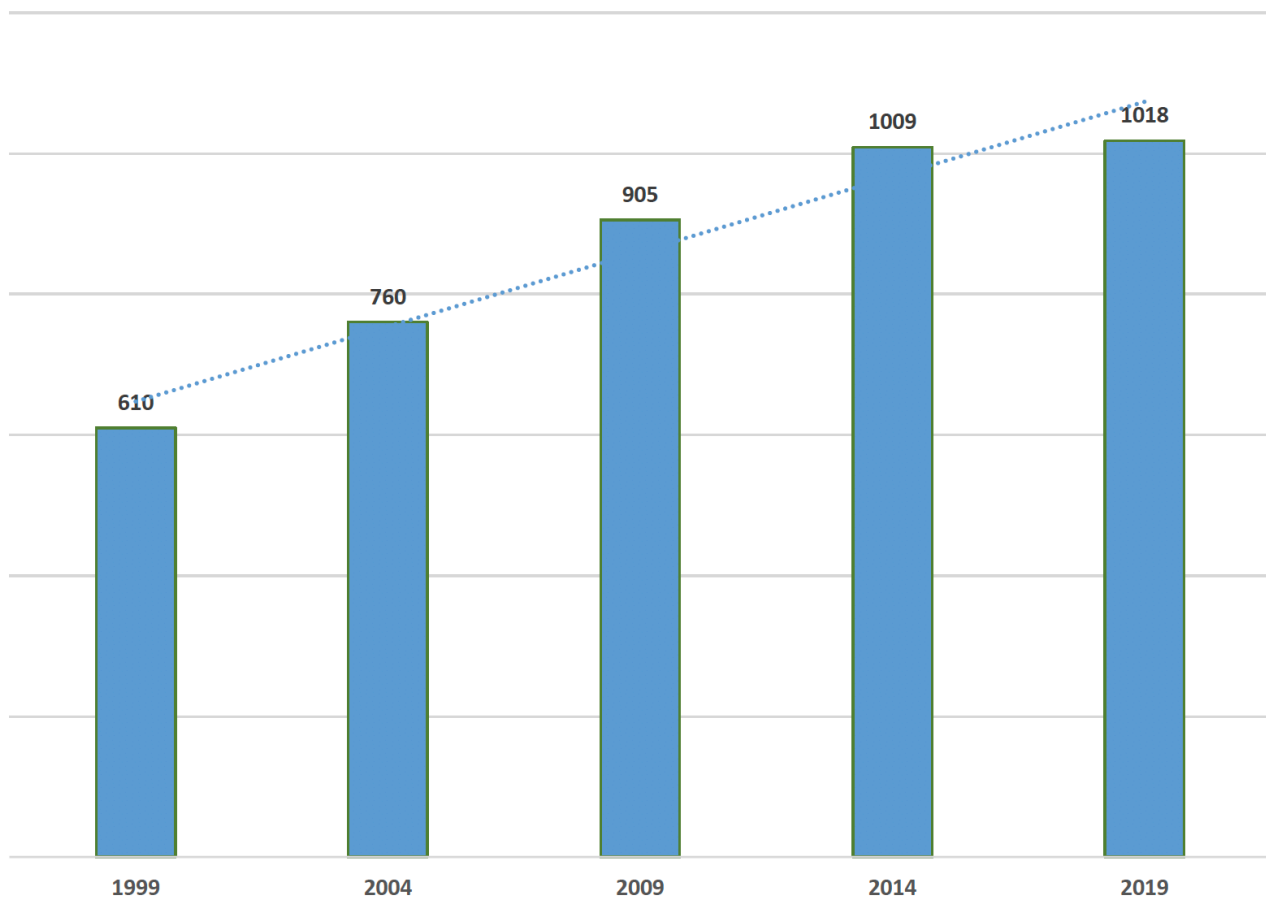
The Cancer Data Management Team:

Cancer data management professionals, known as Certified Tumor Registrars (CTRs) who prepare clinical summaries of patients newly diagnosed with cancer, and benign CNS tumors. The CTRs convert complex clinical data into a coded format in accordance with national standardized cancer data collection rules. The standardization of these data, and the coded format allows for the easy analysis of cancer prevalence, and patient clinical outcomes. This allows epidemiologists to monitor trends and plan interventions. It also allows physicians, and health care providers to evaluate treatment practices locally, regionally and nationally to assess and correct any potential negative variations in patient outcomes. The cancer registry's clinical summaries are updated as warranted to reflect the patient's cancer experience from diagnosis through survivorship. A physician member of UConn Health's Cancer Program routinely audits cancer registry data to ensure its' accuracy.

REVIEW OF 2019 CANCER REGISTRY DATA

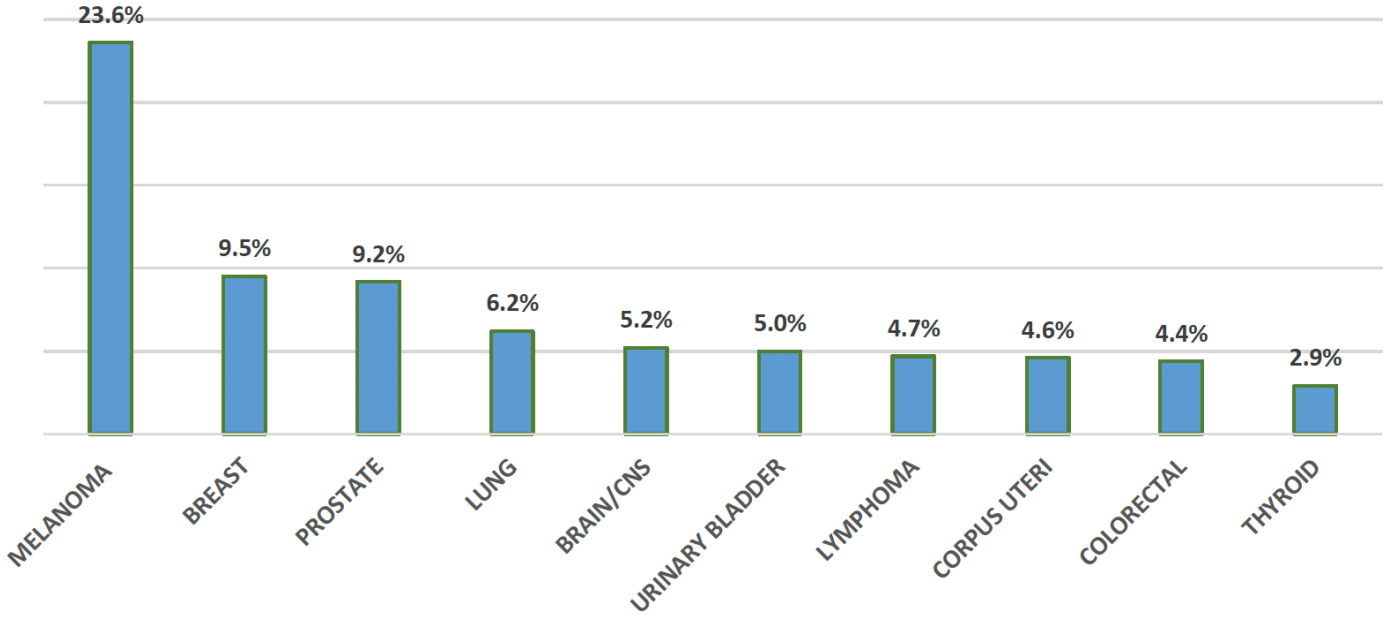
The Certified cancer registry staff added an additional 1018 analytic cases to the database for the 2019 cancer registry accession year. Analytic cases are patients who were newly diagnosed and/or receiving all or a portion of their first course therapy at UConn Health for all newly diagnosed cancers or central nervous system tumors. The top 10 primary sites for newly diagnosed cases for the 2019 cancer registry accession year were melanoma (23.6%), breast (9.5%), prostate gland (9.2%), lung (6.2%) brain/CNS tumors (5.2%), urinary bladder (5.0%), lymphoma (4.7%), corpus uteri (4.7%), colorectal (4.4%), and thyroid (2.9%) . See data graph displays below of 2019 accession year analysis. In keeping with the Commission on Cancer's requirement for lifetime patient follow-up the cancer registry staff consistently maintained rates well above the CoC's patient follow-up requirements that at least 80% for all analytic patients contain current follow-up, and 90% of all analytic patients diagnosed within the last five years have current follow-up. Assessment of follow rates at the time of this report showed a 97.5% overall patient follow up rate as well as a 97.5% rate for patients diagnosed within the last five years.

20 YEAR REVIEW OF NEWLY DIAGNOSED CANCER CASE LOAD - 5 YEAR INTERVAL

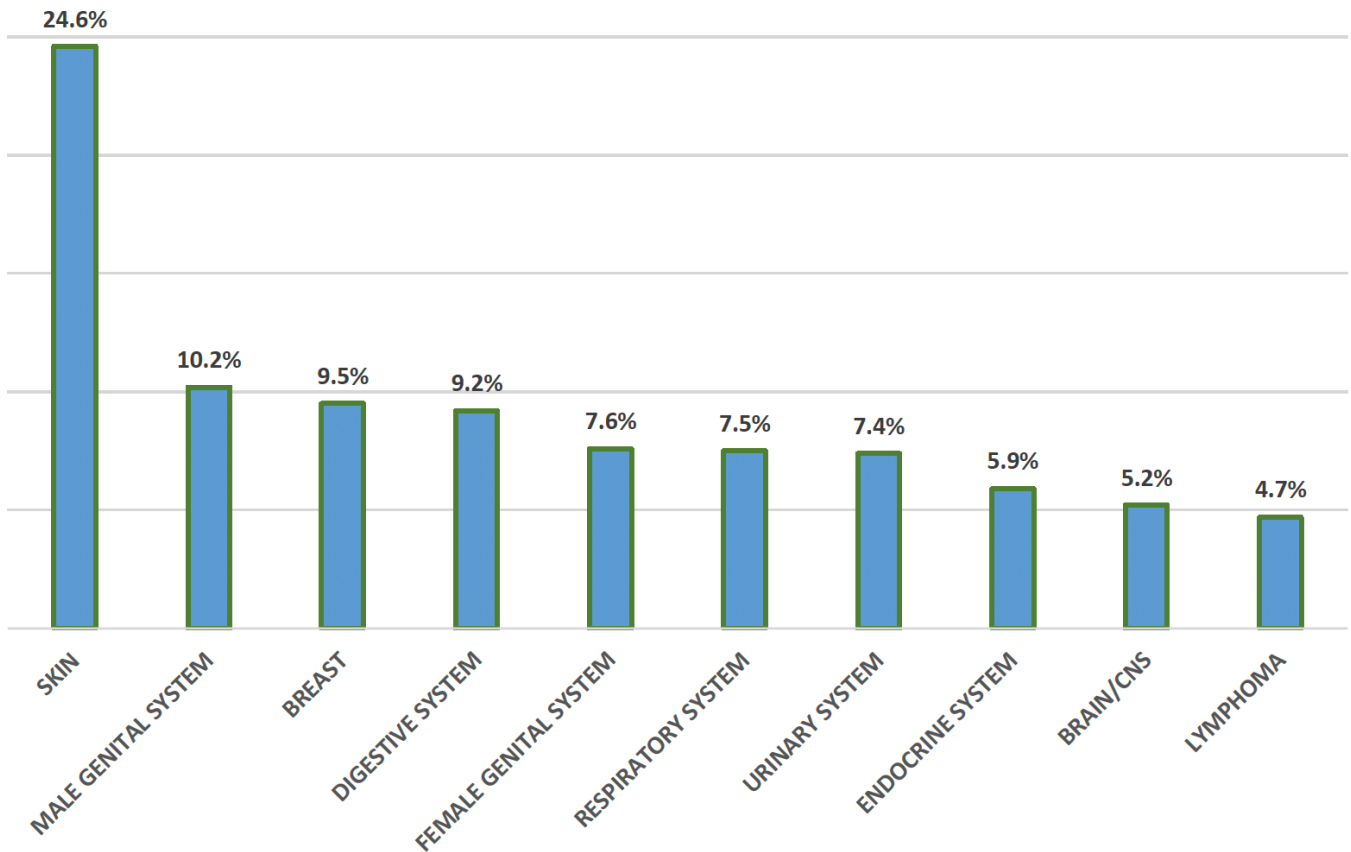


UConn Health's Cancer Program cancer registry database includes data on cancer patients diagnosed back to January 1, 1989. Review of 20 years of cancer registry data demonstrated a 40% increase in the new cancer patient load since 1999.

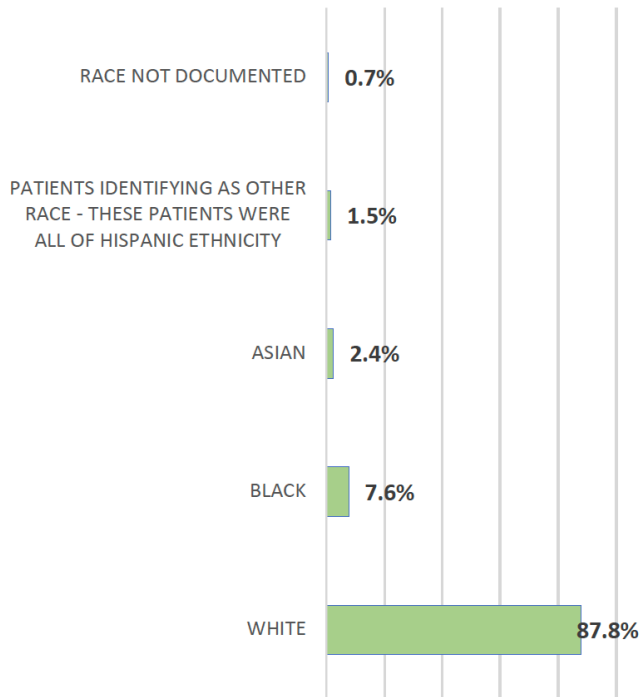
**2019 CANCER REGISTRY ACCESSION YEAR -
TOP 10 NEWLY DIAGNOSED PRIMARY CANCER SITES**



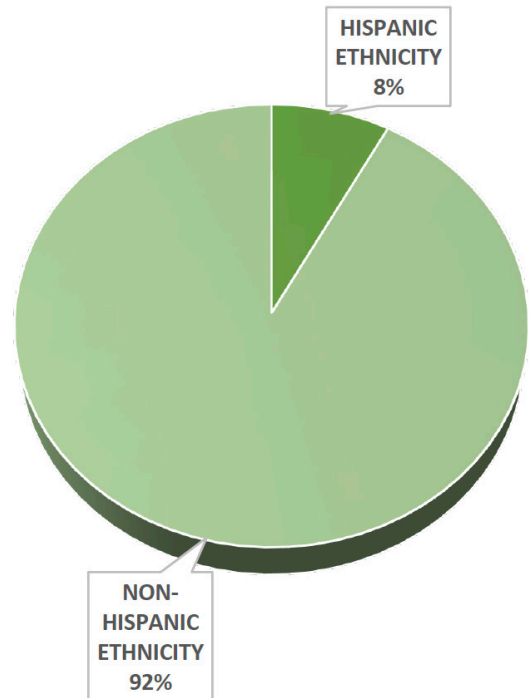
**2019 CANCER REGISTRY ACCESSION YEAR -
TOP 10 NEWLY DIAGNOSED CANCERS BY BODY SYSTEM**



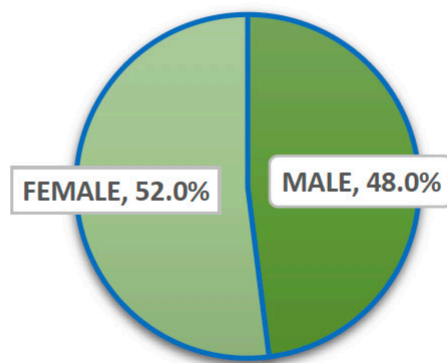
2019 ACCESSION YEAR BY RACE



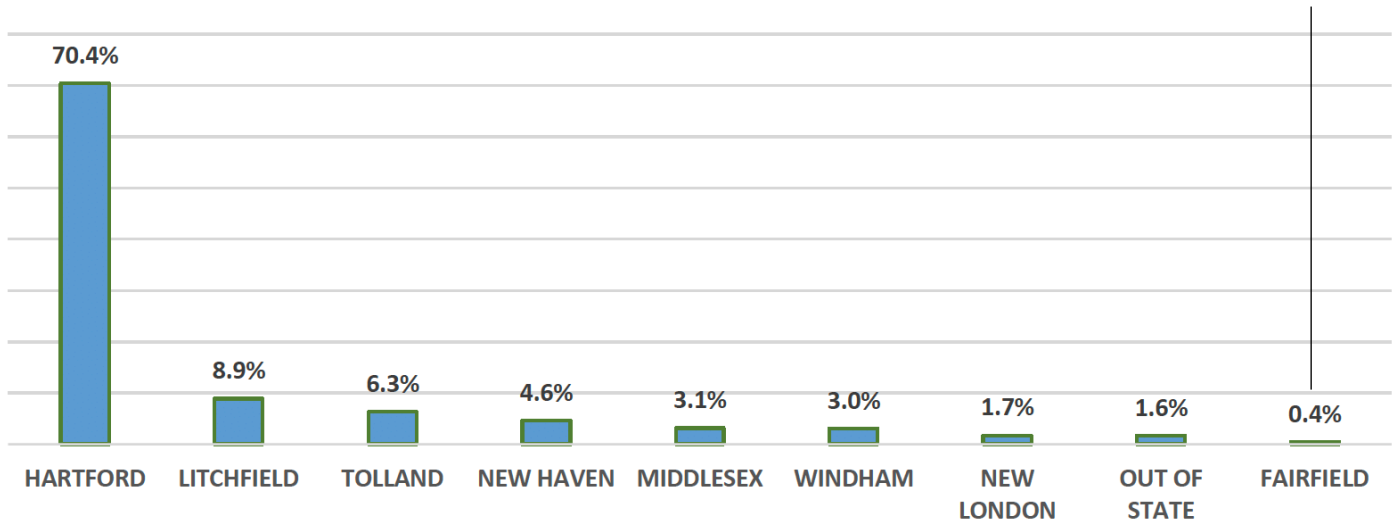
2019 ACCESSION YEAR BY HISPANIC ETHNICITY



2019 CANCER REGISTRY ACCESSION YEAR BY SEX



2019 CANCER REGISTRY ACCESSION YEAR BY COUNTY OF RESIDENCE



Commission on Cancer Standard 4.4 - Accountability Measures & Standard 4.5 Quality Improvement Measures - Based on Cancer Registry Data Last Reported for the Cancer Program Practice Profile Reports (CP3R)

Breast Cancer Measures

Commission on Cancer Standard	Quality Measure	Expected Performance Rate	UConn Health Rate
4.4	BCSRT - Radiation is administered within 1 year (365 days) of diagnosis for women under the age of 70 receiving breast conservation surgery for breast cancer	90%	96%
4.4	HT - Tamoxifen or third generation aromatase inhibitor is recommended or administered within 1 year (365 days) of diagnosis for women with AJCC T1c or stage IB-III hormone receptor positive breast cancer	90%	97%
4.4	MASTRT - Radiation therapy is recommended or administered following any mastectomy within 1 year (365 days) of diagnosis of breast cancer for women with >= 4 positive regional lymph nodes	90%	100%
4.5	nBx - Image or palpation-guided needle biopsy to the primary site is performed to establish diagnosis of breast cancer	80%	86%

RATES FROM CASES REPORTED TO THE NCDB 2019

COLON-RECTAL CANCER MEASURE:

Commission on Cancer Standard	Quality Measure	Expected Performance Rate	UConn Health Rate
4.5	12RLN - At least 12 regional lymph nodes are removed and pathologically examined for resected colon cancer	85%	94%
4.5	RECRTCT - Preoperative chemo and radiation are administered for clinical AJCC T3N0, T4N0, or Stage III; or Postoperative chemo and radiation are administered within 180 days of diagnosis for clinical AJCC T1-2N0 with pathologic AJCC T3N0, T4N0, or Stage III; or treatment is recommended; for patients under the age of 80 receiving resection for rectal cancer (Quality	85%	100%

RATES FROM CASES REPORTED TO THE NCDB 2019

GASTRIC

Commission on Cancer Standard	Quality Measure	Expected Performance Rate	UConn Health Rate
4.5	G15RLN - At least 15 regional lymph nodes are removed and pathologically examined for resected gastric cancer (Quality Improvement)	80%	100%

RATES FROM CASES REPORTED TO THE NCDB 2019

LUNG CANCER MEASURES:

Commission on Cancer Standard	Quality Measure	Expected Performance Rate	UConn Rate
4.4	LCT - Systemic chemotherapy is administered within 4 months to day preoperatively or day of surgery to 6 months postoperatively, or it is recommended for surgically resected cases with pathologic lymph node-positive (pN1) and (pN2) NSCLC	85%	No cases meeting the criteria.
4.4	LNoSurg - Surgery is not the first course of treatment for cN2, M0 lung cases	85%	100.0%

UConn **HEALTH**

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