

Cancer Program Annual Report 2022 Calendar Year



Minneapolis VA Health Care System

January 2024

VA



U.S. Department of Veterans Affairs
Veterans Health Administration
Minneapolis VA Health Care System



**Minneapolis VA Health Care System (MVAHCS)
Cancer Program 2022 Annual Report**

2022 CANCER COMMITTEE MEMBERSHIP

Cancer Committee Chair: Michael Risk, MD, Urology Service
Cancer Liaison Physician: Anthony Rezcallah, MD, Surgery
Cancer Program Administrator: Kurt Thielen, Associate Director/COO
Cancer Program Coordinator: Wendy McDonell, RN, Oncology
Cancer Registry Quality Coordinator: Kimberly Saterbak, RHIT, CTR
Cancer Conference Coordinator: Kimberly Saterbak, RHIT, CTR
Quality Improvement Coordinator: Kori Geinhart, RN/Greg Geiselman, LSSB, PTA, CMRP
Clinical Research Coordinator: Cecilia Sheen, PA, Oncology
Psychosocial Services Coordinator: Julie Stegner, LICSW
Survivorship Program Coordinator: Tonya Larson, RN
Community Outreach Coordinator: Wendy McDonell, RN, Oncology
Surgical Oncology: Christopher LaRocca, MD
Pulmonary: Anne Melzer, MD
Imaging: Damon Shearer, MD
Hematology/Oncology: Mark Klein, MD
Hematology Oncology: Gobind Tarchand, PA
Radiation Oncology: Joaquin Silva, MD
Pathology: J. Carlos Manivel, MD
Pharmacist: Patrice Hohn, Rph
Nutrition: Megan Larson, RD
Oncology Nursing: Amanda Haller, RN
Palliative Care: Jordan Keen, MD
ENT Nurse Navigator: Mary Bauer, RN
Women's Health Nurse Navigator: Katie Westanmo, RN, MSN, OCN, CBCN
Endocrinology: Tyler Drake, MD
Speech Language Pathology: Ann St. Jacques, SLP
Occupational Therapy: Marnie Roiger, OT
Physical Therapy: Ashley Cassel, PT

Hematology/Oncology 2021

The focus of the Hematology/Oncology Section is to provide quality comprehensive cancer patient care, to conduct both clinical and laboratory cancer research programs to improve the care and outcome of our VA cancer patients, and to educate trainees in cancer care. At the end of 2022, the section had 3 full-time and one part time staff physicians, 9 advanced practice providers, 3.2 RN case managers, an RN clinical trial nurse, and a research coordinator for the VA Lung Cancer Precision of Oncology Program (LPOP). One of the advanced practice providers coordinates the pre-stem cell transplant workup, communication with transplant centers, and post-transplant follow-up. One advanced practice provider provides oncology care to veterans residing in the St Cloud VA and Ramsey CBOC communities. Hematology/Oncology works closely with three Oncology pharmacists and an Oncology social worker. The Hematology/Oncology Section provides both inpatient and outpatient consultative services for the evaluation and care of approximately 25-50 consult patients weekly. The Minneapolis VA Healthcare System (VAHCS) continues to be in the top 5 VA cancer programs by volume in the country.

The Hematology/Oncology Section participates in medical student, residency, and fellowship training programs of the University of Minnesota, as well as serving as a training site for PA students from the Des Moines, St. Catherine, and Bethel programs. Trainees work with a designated staff member in the outpatient clinics and on the consultation service.

The Section is an affiliate member of the Alliance Clinical Trials Group with the main membership at the University of Minnesota. This cooperative group/NCI affiliation offers the section the opportunity to provide state of the art clinical trials in lung, genitourinary, and gastrointestinal malignancies, and leukemia and lymphoma. We are one of twelve VA sites participating in NAVIGATE, a program to increase veteran participation in NCI-sponsored clinical trials. In addition, patients have access to trials for other cancers, sponsored by other cancer groups or pharmaceutical companies. The section members are also members of the University of Minnesota Cancer Center. In addition, our site began participation in the VA Lung Cancer Precision Oncology Program (LPOP). This new infrastructure grant (Dr. Mark Klein is the contact Principal Investigator for the grant) involves lung cancer screening and clinical research activities. Within VISN 23 participating sites include Minneapolis, Omaha, Iowa City, Des Moines, Fargo, and St. Cloud.

Opportunities to expand supportive services to cancer patients were identified in 2022 to include requests for funding proposals which have been approved for implementation in FY 2023. Approved proposals 1. Cancer Rehabilitation team with PT, OT and SLP dedicated staff. 2. Cancer psychologist located in the clinic to support patients 3. Creation of a Precision Medicine department focusing on somatic and genetic testing to improve targeted therapy along with the equipment needed to support this developing service.

Hematology-Oncology Ambulatory Clinic

Ambulatory evaluation of consultations, follow-up of established patients and same day assessment of urgent problems are services provided through the Hematology/Oncology Outpatient (Ambulatory) Clinic, located on 3V. In addition, providers manage patients at remote locations via virtual visits including VVC, telemedicine and phone visits.

Chemotherapy education is provided by a nurse case manager who meets with individual patients and their families to provide personalized chemotherapy/immunotherapy education and informational brochures for reinforcement of their learning. Patients who are receiving oral chemotherapy are assessed prior to and during their course of treatment by a chemotherapy pharmacist, to assess baseline and interval development of symptoms and to ensure patient compliance with medication self-administration.

Patient screening for psychosocial distress is coordinated by the clinic's social worker using a self-assessment tool. A clinic RN helps evaluate patients presenting to the clinic with new/changed symptoms, provides monitoring of laboratory tests and medications, and helps arrange transfusions or other interventions as needed. The advanced practice providers and RN are also available by phone to talk with patients for problems or questions.

Additional services available to patients within the ambulatory clinic include palliative care and nutritional support with a registered dietician.

Hematology-Oncology Procedure Clinic

The Hematology-Oncology Procedure Clinic is located adjacent to the 3F Inpatient Heme/Onc/Medicine ward, where inpatients receiving cancer treatments are typically admitted. Procedure Clinic staff provide supportive therapies and cancer treatment to outpatients and those inpatients who are not located on ward 3F. The physical facility for treatment includes 17 patient bays, with an adjacent patient lounge for patients and family. Educational materials are available there, with access to one laptop with WIFI, as well as in the patient education library on the first floor and on TIGR TV, the patient television education video access program. Thera Witte is Nurse Manager for the 3F Inpatient area and Amanda Haller is the Nurse Manager of the Hematology-Oncology Procedure and Infusion Clinic. The Hem/Onc Clinic provides outpatient care five days per week and is staffed by five full time and two 0.9-time registered nurses, three of whom are Oncology-Certified (OCN). Advanced practice providers and an Oncology Social Worker also support patient care. There is also an available Psychologist who offers Neuropsychological evaluation to all patients who are interested and is available for assistance with mental health issues. The nursing staff serves the outpatient Hematology/Oncology clinics, administers chemotherapy/immunotherapy, and provides other patient care needs, such as the transfusion of blood products, antibiotics, and immunoglobulin therapy and integrative care modalities. Vascular access device care, symptom management, and patient education are also provided by the nursing staff. Any necessary outpatient weekend chemotherapy administration is provided by clinic nursing staff or designated chemotherapy-trained inpatient staff nurses.

Hematology/Oncology Remote Infusions

In 2022, the remote infusion program continued to expand services to meet veteran's needs close to home. The program increased the infusion services available close to home and sought out additional funding to expand care for cancer treatment within the CBOC community. Projected plans for 2023 include adding additional RN infusion specialists and onsite specialty LPNs.

Submitted by Mark Klein, MD, Acting Chief Hematology Oncology

Radiation Oncology 2022

The Department of Radiation Oncology treats approximately 400-500 new cancer patients a year. It is a regional VA Radiation Oncology Department and provides radiation therapy services for a five-state area of the Midwest. The department provides both outpatient and inpatient consultative services and is available for emergency consultations 24 hours a day, 365 days a year.

The department provides the following radiotherapy treatments: external beam radiotherapy including 3D conformal radiotherapy, electron beam radiotherapy, intensity-modulated radiotherapy (IMRT), volumetric-modulated arc therapy (VMAT) and stereotactic ablative radiotherapy (SBRT). Patients requiring other specialized radiation therapy procedures such as gamma knife radiosurgery or brachytherapy for gynecological malignancies are referred to the University of Minnesota Medical Center Department of Radiation Oncology, in Minneapolis.

In 2022, the department completed replacement of both of its linear accelerators, installing the second of 2 new Varian TruBeam linacs with 5 photon energies (6MV, 10 MV, and 15 MV and 2 flattening filter free energies, 6MV FFF and 10 MVFFF) photons and a spectrum of 6 to 20 MeV electrons, image-guided radiotherapy (IGRT) with on-board imaging and cone-beam CT, and respiratory gating technology.

Other equipment includes the RayStation treatment planning system, a Toshiba Aquilion Large Bore 4DCT simulator, and Aria Record-and-Verify. Our dosimetry data has been reviewed and approved by the Imaging and Radiation Oncology Core (IROC).

The personnel of the department include two radiation oncologists, two therapeutic medical physicists, two certified medical dosimetrists, seven radiation therapy technologists, one nurse practitioner, one RN, one LPN, and two medical support assistants.

The department achieved a full 3 year accreditation from the APEx-ASTRO Accreditation program). The department is affiliated with the University of Minnesota, and our radiation oncology physicians hold adjunct faculty appointments there. Radiation Oncology residents from the University of Minnesota currently rotate through the department on a regular basis. The department also offers rotations for Radiation Therapy Technology students from the St. Catherine's University School of Radiation Therapy.

The department participates in the Cancer Committee, Radiation Safety Committee, and various multidisciplinary tumor conferences. The department participates in multi-institutional clinical protocols through The Alliance for Clinical Trials in Oncology and the VA Office of Research and Development.

Quality control and quality assurance of radiation therapy treatment and prostate brachytherapy is carried out based on practice guidelines and technical standards from the following: ACR, ASTRO, AAPM, NHPP, NRC, and IROC.

Submitted by Joaquin Silva, MD, Chief Radiation Oncology

Breast Cancer and Gynecology – Oncology Nurse Navigator

A Certified Breast Care Nurse and Oncology Certified Nurse provides personalized navigation services to Veterans newly diagnosed with breast cancers, high-risk for breast cancer, and potential gynecologic cancers. Comprehensive breast cancer care may be provided under one roof, or coordinated locally, as done for gyn-oncology services. The nurse navigator remains an educator and liaison throughout cancer care and survivorship. Veterans at high-risk for developing breast and/or gynecologic cancers, per genetic testing for example, receive education, tracking, screening, and risk-reduction recommendations. The nurse navigator facilitates monthly Multidisciplinary Breast Care Conferences that promotes and enhances communication, collaboration, and efficiency in treatment planning and care coordination.

Submitted by Katie Westanmo, RN, MSN, CBCN, OCN – Women's Health Navigator

Cancer Clinical Trials

The Minneapolis VA Health Care System (MVAHCS) participates in research clinical trials through a variety of sponsors, including the National Cancer Institute, National and VA research cooperative groups, as well as pharmaceutical company sponsors. Enrollment is offered for prevention, screening, and treatment trials. Many of these studies also include quality of life measurements.

The entire MVAHCS Oncology staff is devoted to improving treatments and the quality of life for patients with cancer by offering participation in these trials. In 2022 we enrolled 53 veterans into these studies.

Submitted by Margaret Christner PA-C

Cancer Conferences

During 2022 the Minneapolis VA had a very active Cancer Conference schedule. The purpose of a cancer conference is to prospectively present selected cancer cases to discuss treatment management options in a multidisciplinary setting. Participants include diagnostic radiology, medical oncology, radiation oncology, pathology, surgeons along with other physician specialties & non- allied health staff. The conferences also offer an educational opportunity for physicians working or in training at the facility. The CoC has established that at least 15% of the annual analytic cancer case load must be presented at a cancer conference. 934 new analytic cases, (100% prospective cases) were presented. The facilities ENT conference also offers Continuing Medical Education (CME) credits for attendees.

The following conferences were held in 2022:

2022 Cancer Conferences

	# Conferences	# Patients Presented	# Participants
Urology	12	33	139
Chest	48	298	960
General	16	65	207
Breast	12	61	194
ENT	52	267	1671
Liver	23	89	258

Submitted by Nancy Hedstrom, BS, RHIT, CTR

2022 Annual Report of Quality Improvements for the Cancer Program Radiation Treatment Delays for Dental Clearance Prior to treatment for Head/Neck Cancers

There is a delay in radiation treatment when a dental review/clearance is needed prior to initiation of treatment. There was an average of 50.33 days from diagnosis to treatment, with the standard benchmark to begin treatment within 42 days of diagnosis. Decision to implement a process improvement effort to reduce time from diagnosis to treatment by end of Q1 FY23. Process improvement to include appointments & treatments in house & those sent for Care in the Community (CITC). Goal is to have a 16% reduction in average days in the dental clearing process.

Implementations: For in house VA dental appointments an addition of a radio button in the dental consult indicating its purpose (oncology dental clearance) to aid in scheduling process was implemented. For CITC consult requests, implemented a 'Red Folder' and urgency language.

Results: The average scheduled days for a VA dental appoint was 8.92 days. The average days for a CITC appointment was 13 days. Average days from diagnosis to treatment was 50.33 days.

Psychosocial Distress Screening

At critical points during cancer diagnosis and treatment, patients will be screened for psychosocial distress with the “NCCN Guidelines Version 2.2023 Distress Management” screening tool and results will be documented in the veteran’s electronic medical record. Re-screening to occur at intervals defined by the individual care area. These could include changes in disease status (i.e., remission, recurrence, progression, or treatment related complications).

If the overall distress reported by the veteran is 4 or higher, the health care worker entering the data from the screening tool will offer to enter an appropriate clinical consult with veteran’s verbal consent. If the veteran declines a consult, the health care worker will note/document appropriately.

If the overall distress reported by the veteran is 8 or higher, the health care worker entering the data from the completed screening tool will alert the identified clinical staff (Social Work, Nursing/LIP, Mental Health, Chaplaincy, Dietitian) for further face-to-face assessment based on the identified needs. Patients with multiple categories of needs will first be referred to the clinician and Social Worker for initial review.

Link to Distress Thermometer Screening Tool:

https://dvagov.sharepoint.com/sites/chamincancercare/Shared%20Documents/Forms/Allitems.aspx?id=%2Fsites%2Fvhamincancercare%2FShared%20Documents%2FNCCN%202023%20distress_thermometer%2Epdf&parent=%2Fsites%2Fvhamincancercare%2FShared%20Documents

[Cancer Care Program - NCCN 2023 distress_thermometer.pdf - All Documents \(sharepoint.com\)](#)

Submitted by Julie Stegner, MSW, LICSW

Cancer Registry

The Cancer Registry serves as a resource for the collection, management, and analysis of data on persons with a diagnosis of cancer, as well as certain types of benign tumors. All patients initially diagnosed and/or receiving all or part of their initial treatment for cancer at the Minneapolis VA Health Care System (MVAHCS) are considered *Analytic Cases* and are accessioned into the registry and followed throughout their lifetime. Patients receiving subsequent treatment at MVAHCS, are also accessioned (effective 1/1/2010). These cases as well as cases diagnosed at autopsy and those reportable by agreement (not collected by the Commission on Cancer) are included in the *non-analytic* category.

The primary goal of the Cancer Registry is to provide data and statistics which can be utilized to evaluate the success of specific treatment modalities, as measured by the disease-free interval and length of survival. Data collected is used by the hospital's medical staff, ancillary services, VA Central Cancer Registry (VACCR), Minnesota Department of Health (MDH) and the National Cancer Database (NCDB).

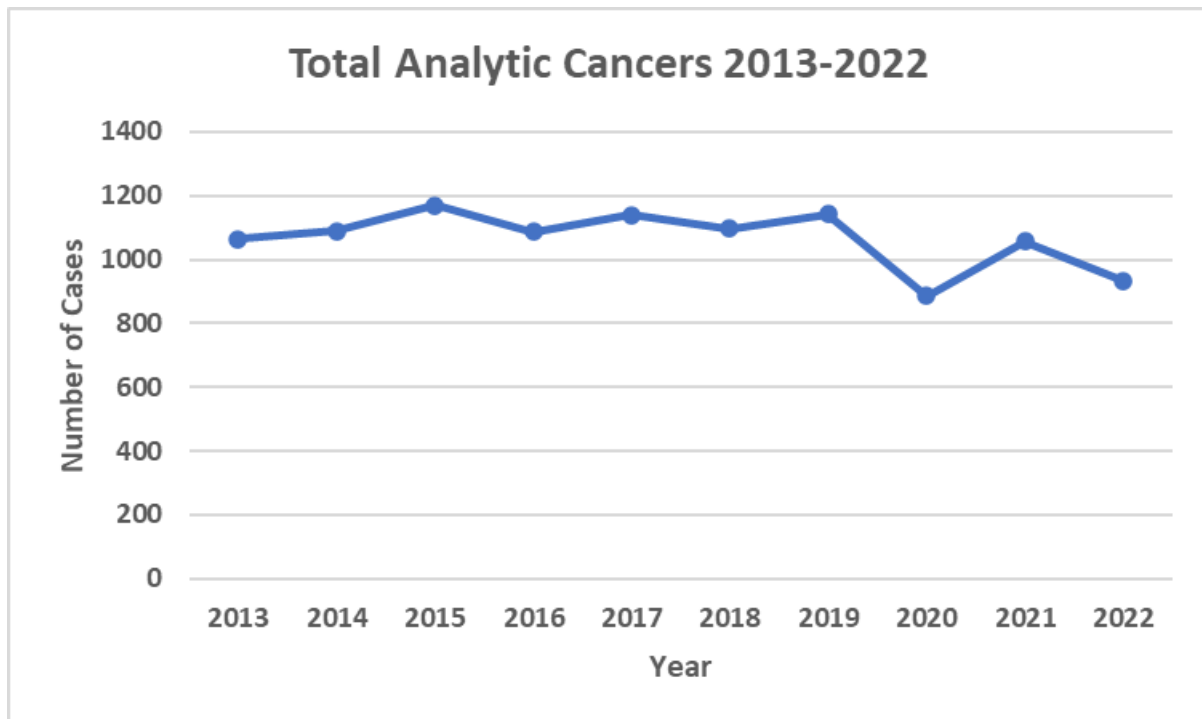
There are approximately 5,889 analytic patients requiring active follow-up per the Commission on Cancer (CoC) rules. The cancer registry has consistently maintained follow-up in compliance with CoC standards. The Cancer Registry is currently staffed with 3.5 FTE's. There is one CTR lead, one full time CTR and one part-time (.5) CTR doing case abstracting. There are two additional non-CTR HIMS staff that provide approximately .5 FTE each to the cancer registry; with one doing follow-up and the other assisting with casefinding. During 2022 the Cancer Registry processed 26 requests for information, none of the data requests in 2022 contributed to IRB approved studies.

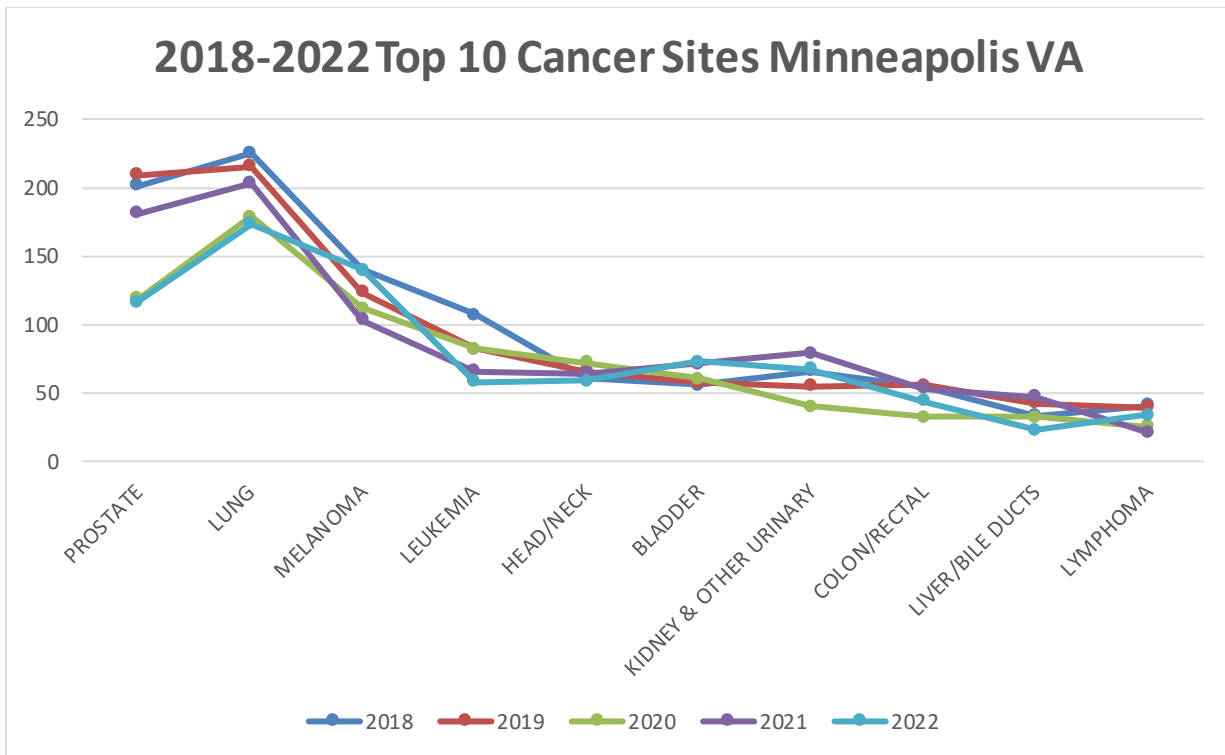
Cancer Registry Statistics and Workload

Total Cancers 2013-2022 & Top Primary Sites 2018-2022

Minneapolis VA Health Care System's incidence of analytic cancers has remained consistent each year from 2013-2022 with a slight increase in total cases each year except for 2016 and 2018 where there was a slight drop. In 2020 there was a large drop in the number of total cases most likely due to the COVID pandemic. Cases increased close to typical annual numbers in 2021 & a decrease in 2022.

During 2022 the top five cancer sites at Minneapolis VA were prostate, lung, melanoma (includes in-situ melanomas), leukemia, head and neck, and bladder.





The table on pages 11-13 list the cases accessioned into the Cancer Registry from 2019 to 2022; by primary site. The number of analytic cases declined in 2019-2020 likely due to the cancer screening policy changes put in place due to the COVID pandemic; with 1143 analytic cases in 2019 & 886 analytic cases in 2020. In 2021 there were 1056 analytic cases & 1285 total registry cases (analytic & non-analytic). In 2022 there were 934 analytic cases & 1168 total registry cases (analytic & non-analytic).

Submitted by Nancy Hedstrom, BS, RHIT, CTR

Cancer Registry Annual Case Summary Report 2019 - 2022 (page 1 of 3)

Distribution of Primary Cancer Sites Minneapolis VA Health Care System

ANNUAL CASE SUMMARY	2022			2021			2020			2019		
	Total	Analytic	Non-Analytic	Total	Analytic	Non-Analytic	Total	Analytic	Non-Analytic	Total	Analytic	Non-Analytic
System: Lip/Oral Cavity/Pharynx												
LIP	4	4	0	7	7	0	3	2	1	11	11	
TONGUE, BASE	7	5	2	11	10	1	7	5	2	7	5	2
TONGUE, OTHER NOS	5	4	1	3	3	0	4	4	0	6	5	1
GUM	3	2	1	0	0	0	3	3	0	3	3	
FLOOR OF MOUTH	3	1	2	0	0	0	3	3	0	2	2	
PALATE	2	1	1	2	2	0	1	1	0	0	0	
OTHER/NOS MOUTH PARTS	2	1	1	3	3	0	5	5	0	4	4	
PAROTID GLAND	3	3	0	0	0	0	3	3	0	1	1	
TONSIL	9	7	2	9	6	3	15	15	0	8	6	2
OROPHARYNX	4	4	0	1	1	0	2	2	0	4	4	
NASOPHARYNX	2	2	0	2	2	0	0	0	0	1	1	
PYRIFORM SINUS	2	2	0	4	3	1	3	3	0	5	5	
HYPOPHARYNX	1	0	1	1	1	0	0	0	0	0	0	
OTHER LIP & PHARYNX	0	0	0	0	0	0	1	1	0	1	1	
SUBTOTAL	47	36	11	43	38	5	50	47	3	53	48	5
System: Digestive Organs												
ESOPHAGUS	22	13	9	20	18	2	21	18	3	32	26	6
STOMACH	13	12	1	16	13	3	11	9	2	25	18	7
SMALL INTESTINE	2	2	0	14	13	1	3	1	2	7	5	2
APPENDIX	0	0	0	0	0	0	1	1	0	3	3	0
COLON	43	32	11	49	38	11	43	28	15	44	38	6
RECTOSIGMOID JUNCTION	3	2	1	6	5	1	3	2	1	5	3	2
RECTUM	12	9	3	14	11	3	6	2	4	19	15	4
ANUS/ANAL CANAL	8	3	5	4	2	2	4	4	0	2	1	1
LIVER/INTRAHEPATIC BILE DUCTS	33	22	11	46	41	5	33	29	4	43	39	4
GALLBLADDER	1	1	0	0	0	0	5	2	3	1	0	1
EXTRAHEPATIC BILIARY DUCT/BILIARY TRACT	2	2	0	7	7	0	5	5	0	6	5	1
PANCREAS	41	26	15	37	27	10	28	24	4	23	19	4
OTHER-DIGETIVE ORGANS	2	1	1	3	1	2	1	1	0	0	0	0
SUBTOTAL	182	125	57	216	176	40	164	126	38	210	172	38

Cancer Registry Annual Case Summary Report 2019 - 2022 (page 2 of 3)

Distribution of Primary Cancer Sites Minneapolis VA Health Care System

ANNUAL CASE SUMMARY	2022			2021			2020			2019		
	Total	Analytic	Non-Analytic	Total	Analytic	Non-Analytic	Total	Analytic	Non-Analytic	Total	Analytic	Non-Analytic
System: RespiratorySystem/ Intrathoracic Organs												
NASAL CAVITY,												
MIDDLE EAR	0	0	0	0	0	0	0	0	0	3	3	0
ACCESSORY SINUS	1	1	0	0	0	0	1	1	0	1	1	0
LARYNX	14	10	4	12	9	3	12	10	2	18	17	1
TRACHEA	0	0	0	0	0	0	2	2	0	0	0	0
LUNG/BRONCHUS	209	172	37	241	203	38	214	177	37	230	216	14
THYMUS	1	1	0	1	0	1	4	4	0	0	0	0
HEART/MEDIASTINUM/ PLEURA	1	1	0	4	2	2	1	0	1	2	2	0
SUBTOTAL	226	185	41	258	214	44	234	194	40	254	239	15
System: Bone	2	2	0	3	2	1	2	2	2	1	1	0
SUBTOTAL	2	2	0	3	2	1	4	2	2	1	1	0
System: Hematopoietic/ Reticulendothelial	99	82	17	98	80	18	113	99	14	110	105	5
SUBTOTAL	99	82	17	98	80	18	113	99	14	110	105	5
System: Skin (excluding reproductive)	157	146	11	121	111	10	125	118	7	149	131	18
SUBTOTAL	157	146	11	121	111	10	125	118	7	149	131	18
System: Peritoneum/ Retroperitoneum	1	1	0	0	0	0	1	1	0	1	1	0
SUBTOTAL	1	1	0	0	0	0	1	1	0	1	1	0
System: Connective/ Subcutaneous/Other Soft Tissue/Bones	11	8	3	5	3	2	3	2	1	4	3	1
SUBTOTAL	11	8	3	5	3	2	3	2	1	4	3	1
System: Breast (excluding skin)	17	12	5	28	19	9	14	13	1	14	12	2
SUBTOTAL	17	12	5	28	19	9	14	13	1	14	12	2
System: Female Genital Organs										0		
VULVA	0	0	0	0	0	0	0	0	0	1	1	0
CERVIX UTERI	1	0	1	2	0	2	3	1	2	6	0	6
CORPUS UTERI	3	0	3	2	2	0	0	0	0	2	2	0
OVARY	2	1	1	0	0	0	0	0	0	0	0	0
SUBTOTAL	6	1	5	4	2	2	3	1	2	9	3	6

Cancer Registry Annual Case Summary Report 2019 - 2022 (page3 of 3)

Distribution of Primary Cancer Sites Minneapolis VA Health Care System

ANNUAL CASE SUMMARY	2022			2021			2020			2019		
	Total	Analytic	Non-Analytic	Total	Analytic	Non-Analytic	Total	Analytic	Non-Analytic	Total	Analytic	Non-Analytic
System: Male Genital Organs												
PENIS	6	5	1	2	2	0	4	4	0	6	6	0
PROSTATE GLAND	164	118	46	249	183	66	170	119	51	246	209	37
TESTIS	5	4	1	7	7	0	2	0	2	5	4	1
MALE GENITALIA OTHER	0	0	0	0	0	0	1	1	0	1	1	0
SUBTOTAL	175	127	48	258	192	66	177	124	53	258	220	38
System: Urinary Tract										0		
KIDNEY	67	57	10	77	71	6	32	31	1	55	48	7
RENAL PELVIS	6	6	0	5	5	0	7	6	1	5	5	0
URETER	6	4	2	1	1	0	3	3	0	3	3	0
BLADDER	77	70	7	75	71	4	73	61	12	63	56	7
URINARY ORGANS/OTHER	0	0	0	2	2	0	0			2	2	0
SUBTOTAL	156	137	19	160	150	10	115	101	14	128	114	14
System: Eye/Brain/Other CNS										0		
EYE/ADNEXA	0	0	0	0	0	0	2	0	2	5	2	3
MENINGES	9	6	3	13	9	4	7	7	0	9	9	0
BRAIN	8	7	1	10	9	1	9	7	2	12	11	1
SPINAL CORD, CRANIAL & PERIPHERAL NERVES	3	2	1	1	1	0	2	2	0	4	4	0
SUBTOTAL	20	15	5	24	19	5	20	16	4	30	26	4
System: Thyroid/Other Endocrine												
THYROID GLAND	17	16	1	14	12	2	5	5	0	21	18	3
ADRENAL GLAND	1	1	0	0	0	0	1	1	0	0	0	0
OTHER ENDOCRINE GLAND	6	5	1	8	8	0	5	5	0	10	9	1
SUBTOTAL	24	22	2	22	20	2	11	11	0	31	27	4
System: Other Ill-defined Sites	0	0	0	2	2	0	4	2	2	1	1	0
SUBTOTAL	0	0	0	2	2	0	4	2	2	1	1	0
System: Lymph Nodes	41	31	10	37	22	15	30	26	4	39	35	4
SUBTOTAL	41	31	10	37	22	15	30	26	4	39	35	4
System: Unknown Primary	4	4	0	8	6	2	4	3	1	6	6	0
SUBTOTAL	4	4	0	6	6	0	4	3	1	6	6	0
TOTAL	1168	934	234	1285	1056	229	1072	886	186	1298	1143	154

Age at Diagnosis

In 2022, 19.8% of our patients with a new reportable neoplasm in the 60–69-year-old age group. 52.1% of our patients in the 70-79-year-old age group. There was a slight decrease in the percentage of cases diagnosed in the 60-69 age group & in the 70-79 age group since 2021.

2022 ANALYTIC CANCERS BY AGE GROUP		
AGE GROUP	NUMBER OF CASES	PERCENT OF CASES
20-29	1	0.1%
30-39	13	1.4%
40-49	16	1.7%
50-59	58	6.2%
60-69	185	19.8%
70-79	487	52.1%
80-99	174	18.6%
TOTALS	934	100.0%

Distribution by Gender and Race

In 2022, 96.5% of our patients with a new reportable neoplasm were male, and 91.0% were Caucasian.

2022 ANALYTIC CANCERS BY GENDER		
GENDER	NUMBER OF CASES	PERCENT OF CASES
MALE	901	96.5%
FEMALE	33	3.5%
TOTALS	934	100.0%

2022 ANALYTIC CANCERS BY RACE		
RACE	NUMBER OF CASES	PERCENT OF CASES
White	847	90.7%
Black	40	4.3%
Unknown	31	3.3%
American Indian, Aleutian, Eskimo	8	0.9%
Other, including Asian	2	0.2%
Hawaiian	4	0.4%
Filipino	1	0.1%
Pacific Islander	1	0.1%
TOTALS	934	100.0%

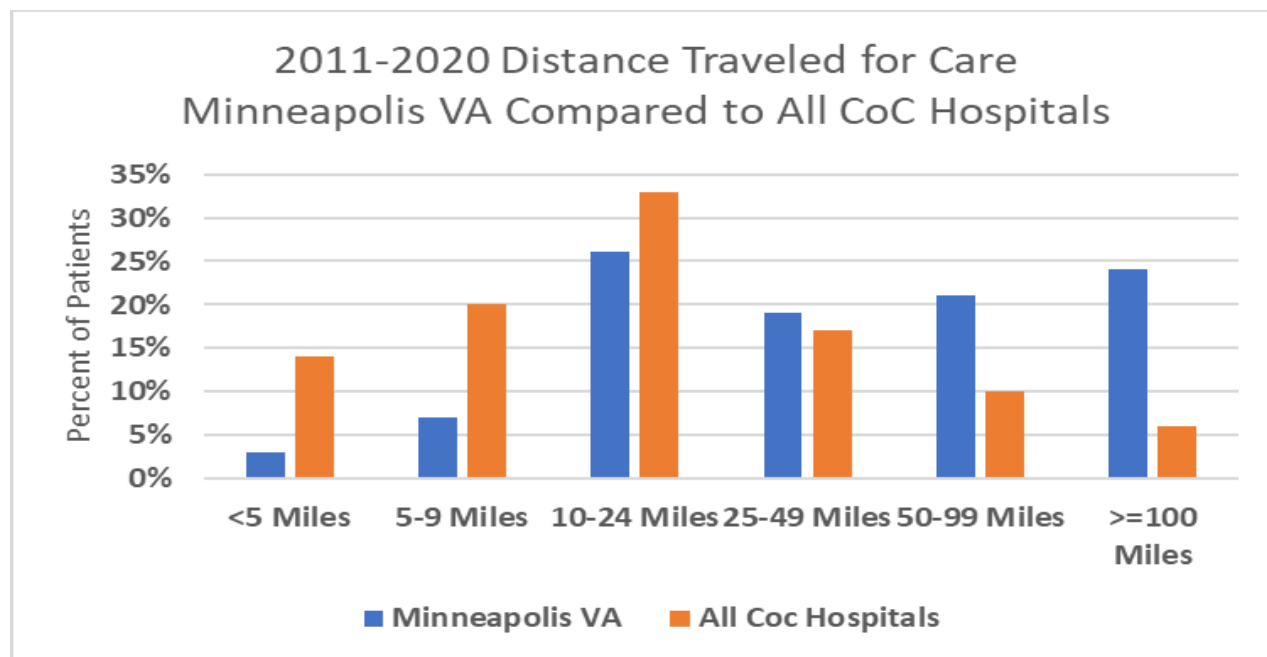
Tobacco Use

In 2022, 50.5% of our veterans previously had history of tobacco use. 21.5% of veterans were cigarette smokers at time of cancer diagnosis, while 21.3% have never used tobacco products.

ANALYTIC 2022 CANCERS BY TOBACCO HISTORY		
TOBACCO USE	NUMBER OF CASES	PERCENT OF CASES
Previous use	472	50.5%
Cigarette smoker, current	201	21.5%
Never used	199	21.3%
Unknown	26	2.8%
Cigar/Pipe smoker, current	20	2.1%
Snuff/Chew/Smokeless, current	14	1.5%
Combination use, current	2	0.2%
TOTALS	934	100%

Distance Traveled (MVAHCS vs. All CoC Hospitals 2011 to 2020).

The distance that our patients travel for treatment is a factor that VHA is continually working on to improve the care for our veterans. Comparing the distance that our patients travel for treatment against data for all other CoC approved hospitals compiled by the National Cancer Database, we see that approximately 24% of our patients travel 100 miles or more, compared to 6% for all other hospitals. Conversely only 7% of our patients travel 9 miles or less compared to 20% for all other CoC approved hospitals nationwide.



Source: National Cancer Data Base (NCDB)/ Commission on Cancer (CoC).

2022 State of Residence at Diagnosis

The Minneapolis VA Health Care System is a Regional Referral Center with patients referred primarily within the area representing VISN 23 (shown below). Approximately 90% (839/934) of our new patients in 2022 were residents of Minnesota. Approximately 8% (78/934) were residents of Wisconsin. In 2022 there were approximately 1% (6/934) were residents of North and South Dakota.

Facility Referred From

Patients from a wide variety of facilities are referred to the Minneapolis VA Health Care System for veteran benefits and the services provided here. In 2022 the St Cloud VA Medical Center referred 13 patients to MVAHCS for cancer diagnostic or treatment services.

FACILITY REFERRED FROM	NUMBER OF PATIENTS
ST CLOUD VA MEDICAL CENTER	13
FAIRVIEW	8
MAYO CLINIC	5
UNIVERSITY OF MINNESOTA HOSPITAL	4
BAY PINES VA MEDICAL CENTER	4
REGIONS HOSPITAL	3
MERCY MEDICAL CENTER	3
BLACK HILLS VA MEDICAL CENTER	3
FARGO VA MEDICAL CENTER	2
ABBOTT NORTHWESTERN HOSPITAL	2
OTHER HOSPITALS	43
TOTALS	90

Facility Referred To

During 2022 many patients were referred elsewhere for treatment; either for specialty care, or for care closer to home. Below are some of the facilities that our patients were referred to based on Cancer Registry abstracting. 134 patients received some type of fee basis treatment at non-VA facilities, including Stereotactic Body Radiation Therapy, Brachytherapy, Gammaknife treatment, and other specialty procedures. Many patients had chemotherapy or radiation closer to home.

FACILITY REFERRED TO	NUMBER OF PATIENTS
MAYO CLINIC	26
FAIRVIEW	16
UNIVERSITY OF MINNESOTA HOSPITAL	12
ESSENTIA	7
RADIATION THERAPY CENTER OF WESTERN WI	5
ABBOTT NORTHWESTERN HOSPITAL	5
REGIONS HOSPITAL	4
CENTRACARE HEALTH COBURN CANCER	4
WOODWINDS HOSPITAL	3
MINNEAPOLIS RADIATION ONCOLOGY	3
OTHER HOSPITALS	49
TOTALS	134

Focus on Thyroid Cancer

CANCER FACTS

Incidence: An estimated 43,800 new thyroid cancer cases will be diagnosed in the US in 2022. Due in part to the adoption of more conservative diagnostic criteria, the incidence rate declined by 2.5% per year from 2014 to 2018. Incidence of thyroid is almost 3 times higher in women than men.

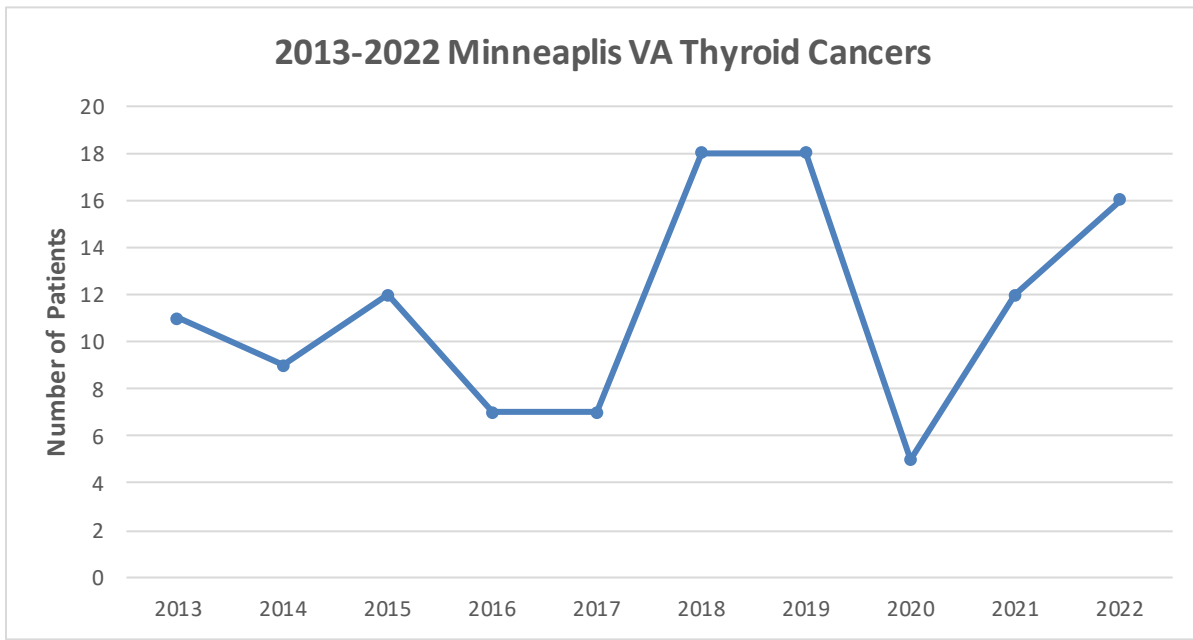
Risk Factors: Risk factors include female, having history of goiter (enlarged thyroid) or thyroid nodules, a family history of thyroid cancer, radiation exposure early in life, excess body weight, and certain rare genetic syndromes, such as familial adenomatous polyposis (FAP). Those who test positive for a mutation in the RET gene, which causes a hereditary form of thyroid cancer (familial medullary thyroid cancer), can lower their risk of developing the disease by having the thyroid gland surgically removed.

Signs and Symptoms: Most common symptom of thyroid cancer is a lump in the neck. Other symptoms include a tight or full feeling in the neck, difficulty breathing or swallowing, hoarseness, swollen lymph nodes, and pain in the throat or neck that does not go away. Many thyroid cancers are diagnosed incidentally in people without symptoms when an abnormality is seen on an imaging test done for another reason.

Treatment: Most thyroid cancers are highly curable, but about 3% (medullary and anaplastic thyroid cancers) are more aggressive and likely to spread to other organs. Treatment depends on age, tumor size and cell type, and extent of disease. Treatment is usually surgery to remove the thyroid gland (thyroidectomy) and sometimes nearby lymph nodes partially or totally. Radioactive iodine (I-131) treatment may be recommended after complete thyroidectomy for large tumors or when cancer has spread outside the thyroid. Thyroid hormone replacement therapy is given after thyroidectomy to replace hormones normally made by the thyroid gland & to prevent pituitary gland from producing thyroid-stimulating hormone, which lowers the likelihood of recurrence. For some types of advanced thyroid cancer, targeted drugs can be used to help shrink or slow tumor growth.

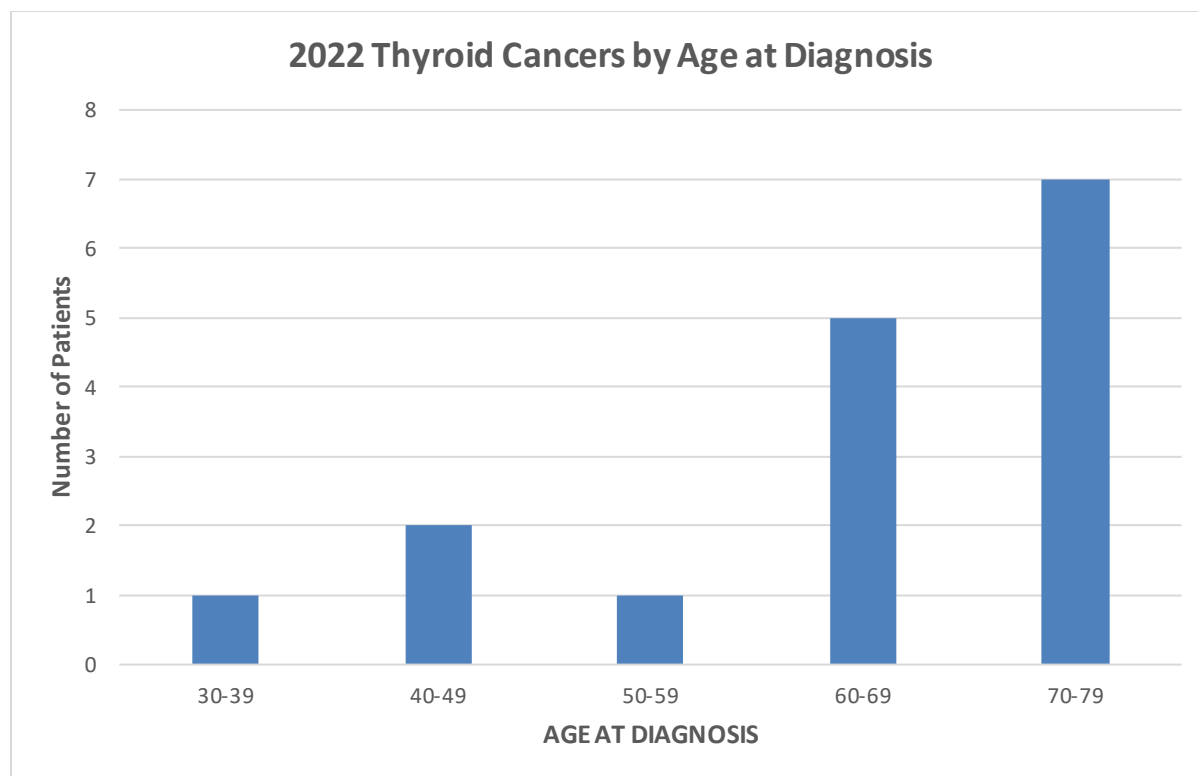
Survival: An estimated 2,230 deaths will occur in 2022 due to thyroid cancer in the US. The death rate for thyroid cancer was stable from 2010 to 2019. The 5-year relative survival rate is 98%, largely because two-thirds of cases are diagnosed at a local stage, but also because treatment is usually successful for most tumor types. Among those diagnosed with distant-stage disease, more than half (53%) survive at least 5 years.

Resources: American Cancer Society (ACS) 2022 Facts and Figures



Age at Diagnosis

In 2022 at Minneapolis VA HCS a total of 16 patients were diagnosed with thyroid cancer. The majority (12) of patients diagnosed with thyroid cancer were in the 60-79 age group and 4 patients ranged in age from 30-59.



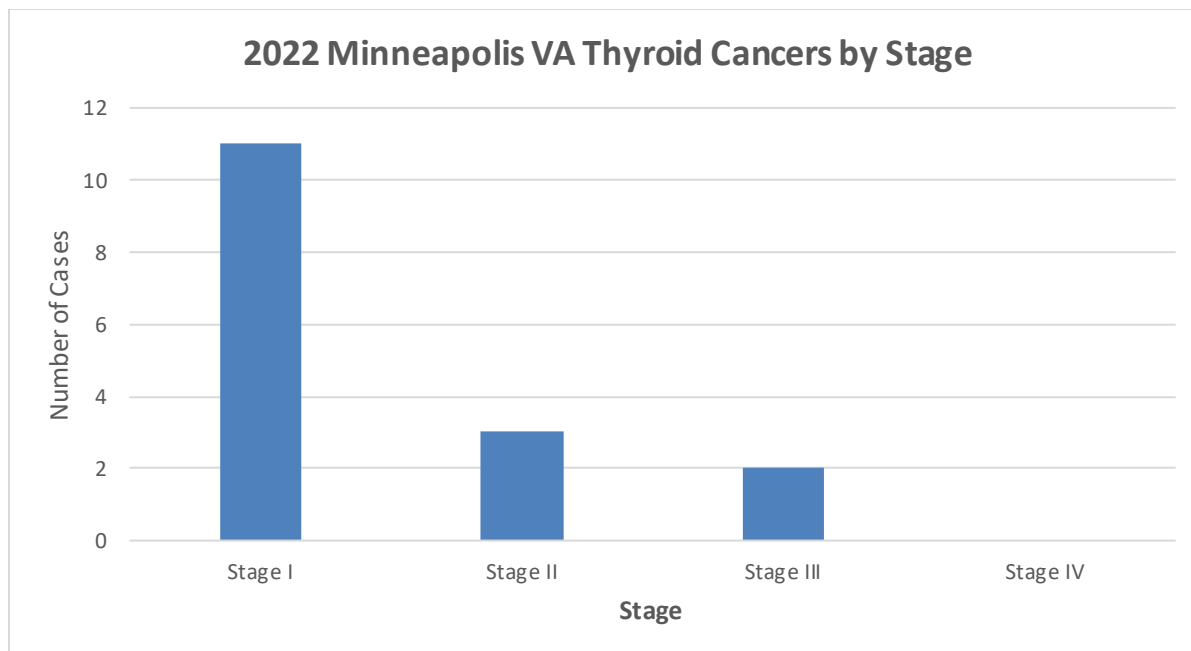
Gender of Patients Diagnosed

In 2022, at Minneapolis VA HCS, most patients with thyroid cancer were males. Although the risk factor is higher in females, most patients at Minneapolis VA HCS are male.

2022 THYROID CANCERS BY GENDER		
GENDER	NUMBER OF CASES	PERCENT OF CASES
MALE	13	81%
FEMALE	3	19%
TOTALS	16	100%

Stage at Diagnosis 2022

In 2022, 11 patients were diagnosed with Stage I, 3 patients were diagnosed with Stage II, & 2 patients were diagnosed with Stage III. No patients were diagnosed with Stage IV.



First Course of Treatment by Stage and Type of Treatment of Patients Diagnosed in 2022

15 of the 16 thyroid cases had surgery: 6 patients had a total thyroidectomy. 3 patients had a total thyroidectomy with a neck dissection. 4 patients had a hemithyroidectomy. 2 patients had a hemithyroidectomy with a neck dissection. 5 of the patients who had surgery, also had I-131 radioactive iodine treatment.

First Course of Treatment of Thyroid Cancers by Stage					
Minneapolis VA Health Care System 2022					
Stage at Diagnosis					
	Stage I	Stage II	Stage III	Stage IV	% Totals
No Treatment/Surveillance	1				6%
Surgery	9		1		63%
Surgery/Radiation (with radioactive iodine)	1	3	1		31%
Totals:	11	3	2	0	100%

2022 Minneapolis VA Thyroid Cancer Treatment	
TREATMENT	NUMBER
SURGERY	
Total Thyroidectomy	6
Total Thyroidectomy + Neck Dissection	3
Hemithyroidectomy	4
Hemithyroidectomy + Neck Dissection	2
I-131 RADIOACTIVE IODINE TREATMENT	5
OTHER	1

Stage at Diagnosis 2019-2022 Comparison

When comparing data for stage at diagnosis at the Minneapolis VA HCS (MVAHCS) compared to all VA hospitals, MVAHCS diagnosed 3-4% more thyroid cancers at stage II and stage III compared to all other VA's. All VA hospitals diagnosed 6.4% more thyroid cancers at stage I and 0.4% more at stage IV.

2019-2022 Thyroid Cancers by Stage at Diagnosis				
MVAHCS Compared to All VA Hospitals				
	Stage I	Stage II	Stage III	Stage IV
MVAHCS	67.3%	21.8%	5.5%	5.5%
All VA's	73.7%	18.1%	2.3%	5.9%

Age at Diagnosis 2019-2022 Comparison

Comparing the Minneapolis VA HCS (MVAHCS) with all VA hospitals for age at diagnosis for thyroid cancers, MVAHCS diagnosed 8% more patients at age group ≥ 70 than all VA hospitals in this category. Comparison of cases in age group 60-69 reveal MVAHCS diagnosed 5% more patients at age group 60-69 than all VA hospitals.

2019-2022 Thyroid Cancers by Age at Diagnosis					
MVAHCS Compared to All VA Hospitals					
	≥ 20 and < 40	≥ 40 and < 50	≥ 50 and < 60	≥ 60 and < 70	≥ 70
MVAHCS	12%	5%	9%	30%	44%
All VA's	11%	11%	18%	25%	36%

Treatment Comparison of Thyroid Cancers

Comparing thyroid cancer treatments at the Minneapolis VA HCS (MVAHCS) compared to all VA hospitals, the main treatment for thyroid cancers was surgery followed by combined surgery and radiation treatment. All VA hospitals had 2.6% more surgeries than those at MVAHCS. MVAHCS treated 18.2% more patients with combination surgery and radiation treatment than all VA hospitals.

2019-2022 Thyroid Cancer Treatment				
MVAHCS Compared to All VA Hospitals				
	None/Surveillance	Surgery	Surgery/Radiation	Other Combination Treatment
MVAHCS	12.3%	61.4%	26.3%	0.0%
All VA's	23.5%	64.0%	8.1%	4%

Sources: Minneapolis VA Cancer Registry, VA Central Cancer Registry (VACCR), National Cancer Database (NCDB)/Commission on Cancer (CoC), Centers for Disease Control (CDC), and American Cancer Society (ACS). Data obtained September 2023 – January 2024.

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Final version presented to the MVAHCS Cancer committee:*