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William L. Lane Cancer Management Center Annual Report 2014

Lymphoma Cancer Study Inside

2012
OUTSTANDING ACHIEVEMENT
AWARD RECIPIENT
Commission on Cancer

Holy Family Hospital

A STEWARD FAMILY HOSPITAL

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Radiation Oncology provided
in collaboration with

UMassMemorial
Health Care

Holy Family Hospital
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From the Registrar:

The Role of Cancer Registry in Oncology

Cancer Registrars are tasked with managing and reporting cancer data. Registrars compile information to create an abstract (patient summary). The abstract consists of a patient's disease from diagnosis through their lifetime. A patient's cancer diagnosis and treatment involves many procedures, often done at more than one location. Registrars gather all data from the initial diagnosis, staging work-up, prognostic factors (such as lymphovascular invasion, HER2 neu status or serum tumor markers), comorbid conditions and treatments to compile a complete and accurate record. In addition, patients are followed for their lifetime as a means of calculating survival rates. Holy Family Hospital uses the data for monitoring quality of care, benchmarking, assessing patterns of care, monitoring adverse outcomes and providing community benefits.

This valuable data is utilized by local, state (Massachusetts Cancer Registry) and national cancer agencies (National Cancer Data Base) to support cancer research, evaluate patient outcomes and identify geographic areas with a high incidence of cancer. The chart to the right depicts the most recent report from the NCDB measuring Holy Family Hospital's performance rates based on nationally recognized standards of care.

Cancer Registry Staff

Anne Saffie, CTR - Cancer Registry Manager

Veronica Martinez - Data Specialist

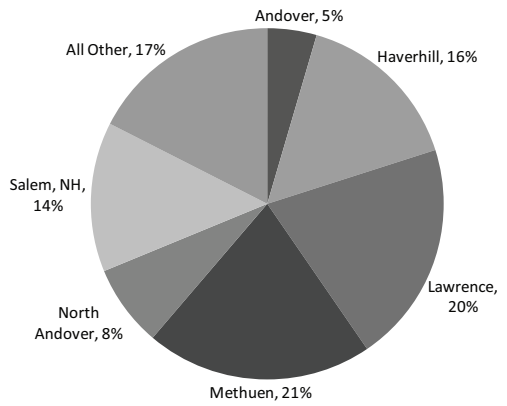
Jill Thresher - Abstractor

Cancer Program Practice Profile Reports *(CP³R)*

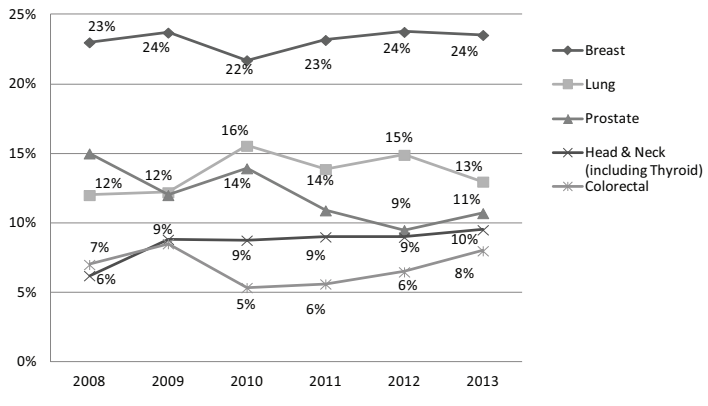
Breast & Colorectal Measures		HFH 2010	HFH 2011	HFH 2012
BREAST	Radiation administered ≤1 year of diagnosis for women <70 with breast conserving surgery. **[BCS/RT]**	100%	100%	98%
BREAST	Combination chemo considered/ administered ≤4 months of diagnosis for women <70 with AJCC T1c N0 M0, or Stage II or III ER/PR negative breast cancer. **[MAC]**	100%	100%	100%
BREAST	Tamoxifen considered or administered ≤1 year of diagnosis for AJCC T1c N0 M0, or Stage II or III ER and/or PR positive cancer. **[HT]**	100%	100%	100%
COLON	Chemo considered/ administered ≤4 months of diagnosis for patients <80 with lymph nodes positive. **[ACT]**	100%	100%	100%
COLON	At least 12 regional lymph nodes removed and pathologically examined for resected colon cancer. **[12RLN]**	88.9%	100%	87.5%

These are the most recent figures available from the National Cancer Data Base.

HFH 2013 Referral Areas



HFH Trends Over Time



Holy Family Hospital 2013 Primary Sites

Primary Site	Analytic Cases	Total Cases	Male	Female
ORAL CAVITY & PHARYNX	**13**	**13**	**11**	**2**
Tongue	3	3	3	0
Floor of Mouth	1	1	1	0
Gum & Other Mouth	1	1	0	1
Tonsil	6	6	5	1
Nasopharynx	1	1	1	0
Hypopharynx	1	1	1	0
DIGESTIVE SYSTEM	**74**	**81**	**46**	**35**
Esophagus	5	6	6	0
Stomach	6	6	4	2
Colon (excluding rectum)	34	37	21	16
Rectum & Rectosigmoid	15	16	8	8
Anus, Anal Canal	2	2	0	2
Liver & Other Biliary	5	7	4	3
Pancreas	7	7	3	4
RESPIRATORY SYSTEM	**88**	**95**	**48**	**47**
Larynx	9	9	6	3
Lung & Bronchus	79	86	42	44
SOFT TISSUE / BONE	**4**	**5**	**3**	**2**
SKIN (excluding basal & squamous)	**8**	**9**	**6**	**3**
Melanoma -- Skin	7	8	5	3
Other Nonepithelial Skin	1	1	1	0
BREAST	**147**	**156**	**3**	**153**
FEMALE GENITAL SYSTEM	**21**	**26**	**0**	**26**
Cervix Uteri	1	3	0	3
Uterus	16	18	0	18
Ovary	3	4	0	4
Vagina	1	1	0	1
MALE GENITAL SYSTEM	**56**	**71**	**71**	**0**
Prostate	49	64	64	0
Testis	7	7	7	0
URINARY SYSTEM	**66**	**67**	**55**	**12**
Urinary Bladder	45	46	41	5
Kidney & Renal Pelvis	20	20	13	7
Ureter	1	1	1	0
BRAIN, CNS	**32**	**33**	**13**	**20**
Brain	19	20	9	11
CNS	13	13	4	9
ENDOCRINE SYSTEM	**44**	**46**	**13**	**33**
Thyroid	39	41	11	30
Other Endocrine	5	5	2	3
LYMPHOMAS	**21**	**21**	**10**	**11**
Hodgkin Lymphoma	1	1	1	0
Non-Hodgkin Lymphoma	20	20	9	11
MULTIPLE MYELOMA	**5**	**5**	**5**	**0**
LEUKEMIAS	**14**	**14**	**6**	**8**
MISCELLANEOUS	**20**	**21**	**14**	**7**
Total	**613**	**663**	**304**	**359**

Administrative Data 2013

NEWS CASES ACCESSIONED 2013	**663**
ANALYTIC	613
Diagnosis only HFH	77
Diagnosis & first treatment HFH	365
Diagnosis elsewhere, first treatment HFH	171
NON-ANALYTIC	
Treatment only for recurrence or metastasis	50
TOTAL CASES IN CANCER REGISTRY	
(since 1993)	
Total living patients in follow-up	6,247
Total living follow-up rate (target 80%)	93%
MULTIDISCIPLINARY CANCER CONFERENCES	
Number of Tumor Boards	48
Number of Cases Presented	274
Number of Sites Represented	48
CANCER SCREENINGS	
Colorectal	2,797
Breast	8,700
Free Prostate Screenings	10
Free Skin Cancer Screenings	37
Free Head & Neck Cancer Screenings	20

2012
OUTSTANDING ACHIEVEMENT AWARD RECIPIENT

Commission on Cancer

Recipient of the Outstanding Achievement Award from the American College of Surgeons Commission on Cancer for six consecutive years (2009-2015)

Holy Family Hospital's Cancer Center is one of only seven hospitals in Massachusetts and two hospitals north of Boston have achieved this designation.

The American Cancer Society estimates that there will be 79,990 cases of lymphoma diagnosed in the United States in 2014, including 9,190 cases of Hodgkin lymphoma and 70,800 cases of non-Hodgkin lymphoma. Lymphomas are a group of heterogeneous hematologic malignancies that are comprised of lymphocytes, the type of white blood cell that is involved with fighting bacterial, viral, and fungal infections. These white blood cells are found in the blood, lymph nodes, and spleen. The three main types of lymphocytes are B cells, T cells, and natural killer cells. The B cells mature into plasma cells, which produce antibodies. The T cells are involved in cellular immunity and cytotoxic effects.

MEDICAL ONCOLOGY

Laura Caprario, MD - Medical Oncology

Hodgkin lymphoma is characterized by its unique Reed-Sternberg cells which are seen under the microscope. It is subdivided into nodular lymphocyte-predominant Hodgkin lymphoma and classical Hodgkin lymphoma. The disease typically affects younger patients than non-Hodgkin lymphoma and has a higher cure rate.

Non-Hodgkin lymphoma can be classified as B-cell lymphoma and T-cell lymphoma depending upon their cell of origin. In addition, non-Hodgkin lymphoma can be subdivided into indolent and aggressive types which reflect their rate of proliferation and chances of curability. In general, indolent lymphomas are chronic. They can be treated with chemotherapy when patients are symptomatic or have threatened organ function. After a period of remission, indolent lymphoma patients relapse. On the contrary, aggressive lymphomas can be irradicated with chemotherapy and radiation. Examples of indolent B-cell lymphomas include small lymphocytic lymphoma, low grade follicular lymphoma, splenic marginal zone lymphoma, lymphoplasmacytic lymphoma, extranodal marginal zone lymphoma, and nodal marginal zone lymphoma. Examples of aggressive B-cell lymphomas include diffuse large B-cell lymphoma, mantle cell lymphoma, plasmablastic lymphoma, and Burkitt's lymphoma. The T-cell lymphomas include peripheral T-cell lymphoma, anaplastic large cell lymphoma, and hepatosplenic T-cell lymphoma.

Diagnosing lymphoma involves imaging with a CT scan or PET/CT scan, a lymph node biopsy, which preferably involves removing an entire lymph node for an accurate diagnosis, flow cytometry, which is an analysis of the types of lymphocytes in the specimen, and a bone marrow biopsy with aspirate.

Treatment depends upon the type of lymphoma. Hodgkin lymphoma is usually treated with the ABVD regimen, which consists of Adriamycin, Bleomycin, Vinblastine, and Dacarbazine. Diffuse large B-cell lymphoma is commonly treated with the R-CHOP regimen, which consists of Rituxan, Cytoxan, Adriamycin, Vincristine, and Prednisone. Rituxan is an antibody therapy that binds to CD20 positive B-cells which are found in B-cell lymphomas. Chronic lymphocytic leukemia can be treated with Rituxan and Bendamustine or a variety of other chemotherapy regimens. The choice of treatment depends on the subtype of lymphoma and the age and other medical conditions of the patient.

Autologous stem cell transplantation can be used in selected patients to increase the length of remission or for patients who relapse after an initial treatment. The treatment is performed at academic medical centers and involves removing stem cells from the patient's blood using a special pheresis machine, then giving high dose chemotherapy to kill the lymphoma cells in the patient's body, and then infusing the patient's stem cells to form a new bone marrow.

Laura Caprario, MD - Medical Oncology

SYMPTOMS

- fevers
- night sweats
- fatigue
- weight loss
- enlarged lymph nodes
- enlargement of the liver or spleen

RADIATION ONCOLOGY

David Goff, MD - Radiation Oncology

At Holy Family Hospital, a comprehensive multidisciplinary approach is utilized in order to diagnose and treat lymphoma patients. Chemotherapy and targeted therapy are often given as initial treatment for lymphoma. Radiation therapy is often given following chemotherapy in order to optimize local and/or regional control of lymphoma. Treatment options include external beam radiation therapy, sometimes requiring intensity modulated radiation therapy technique (IMRT).

External beam radiation therapy utilizing IMRT technique delivers radiation therapy to the lymphatic regions involved by lymphoma. With the inverse computer planning technique, doses of radiation therapy can be given to the target volume while sparing critical neighboring structures including brain stem, spinal cord, eyes, ears, parotid glands, mandible, larynx, lung, heart, liver, bowel, kidneys, bladder, rectum, and femoral heads, thereby minimizing side effects and optimizing quality of life, during and after radiation treatment.

Image guided radiation therapy technique (IGRT) is also utilized during radiation therapy of lymphoma patients. KV x-ray imaging of the radiation fields are obtained prior to treatment in order to accurately deliver radiation therapy. Cone beam KV CT scan imaging can also be used prior to radiation therapy in order to help align the radiation beam with the target volumes. The IGRT technique allows accurate and precise delivery of radiation therapy to the target volume.

A course of palliative radiation therapy can be given to reduce pain from metastatic disease to the bone or other regions, which are symptomatic.

At Holy Family Hospital, advanced radiation therapy techniques including IMRT and IGRT are utilized to optimally treat lymphoma patients. CT imaging, MRI imaging as well as PET/ CT scan imaging are utilized to help delineate target volumes while planning radiation treatment of lymphoma patients. Prior to radiation treatment, imaging is done in order to allow for accurate and precise delivery of treatment on a daily basis.

The goal of radiation therapy is to optimize tumor control as well as spare critical neighboring structures in order to maintain the best possible quality of life for the patient during and following radiation treatment.

David Goff, MD - Radiation Oncology

Prerak Shah, MD – Otolaryngologist, ENT(Left) and Gentry Thatcher, MD – Otolaryngologist, ENT (Right) participate in a special multidisciplinary conference held at the hospital.

PATHOLOGY

The Pathology Department provides important information on tumor classification and staging. Selection of appropriate tissue for flow cytometry is a vital part of the work up of any lymphoma. Immunohistochemical stains are used in conjunction with morphologic characteristics to ensure correct assessment of tumor type, which is vital to the selection of adjuvant therapy.
In addition, the pathologists select appropriate tissue for molecular testing to determine prognosis and the tumor's sensitivity to new state-of-the-art chemotherapeutic agents.

Don Ross, MD, PhD - Chief of Pathology

CLINICAL TRIALS

Holy Family Hospital offers patients access to clinical trial programs which provide opportunities to receive the most advanced cancer therapy treatments in the Merrimack Valley. The program chooses research studies that are based on the needs of the community and appropriate for our patient population.

Holy Family Hospital is proud to be a member of the research community's focus to improve treatment in cancer therapy.

Brenda Cloutier, RN - Research Coordinator

AJCC Staging Manual, 7th edition - Lymphoma

Stage 1 - involvement of a single lymphatic site; **or** a single extralymphatic site without lymph node (LN) involvement (1E)

Stage 2 - involvement of two or more LN regions on the same side of diaphragm; **or** localized involvement of single extralymphatic site with regional LNs involved with or without other LN region on same side of diaphragm (2E)

Stage 3 - involvement of LN regions on both sides of diaphragm which also may be accompanied by extralymphatic extension with adjacent LN involvement (3E), **or** by involvement of spleen (3S) or both (3ES)

Stage 4 - diffuse or disseminated involvement of one or more extralymphatic sites, with or without LNs; Stage 4 involves any involvement of liver, bone marrow, cerebrospinal fluid or lung (other than direct extension from another site for lung)

A - Lack of B symptoms

B - Symptoms include unexplained fevers, drenching night sweats and/or unexplained weight loss of 10% of body weight in the 6 months prior to diagnosis

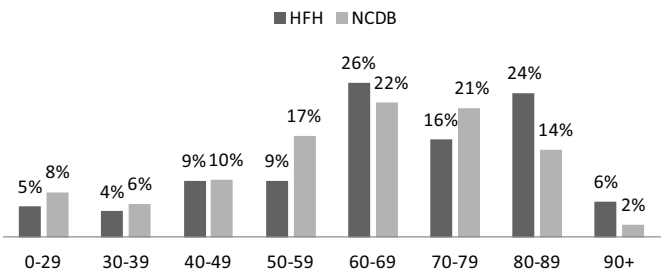
S - Stands for spleen

E - Stands for extranodal site, these can include: breast, GI tract, skin, bone, lung, etc.

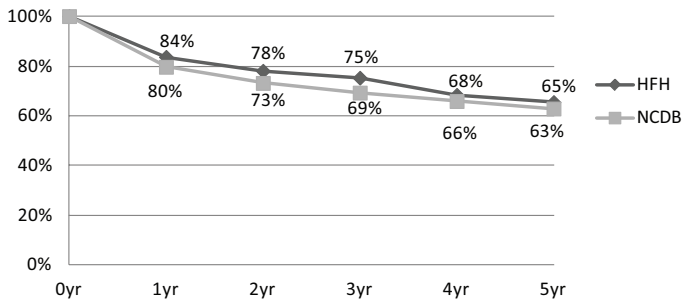
Lymphatic sites are: lymph nodes, Waldeyer's ring, thymus and spleen

Dr. Gokul Prakash and Dr. Robert Moore – Surgery

Lymphoma Age at Diagnosis 2008-2012



Lymphoma Survival for NCDB vs. HFH 2003-2006



Data reflects the most recent information available from the NCDB.

Survival for all stages of lymphoma treated at Holy Family Hospital exceeds the survival by stage for lymphoma in the National Cancer Database, highlighting the excellent care that our team provides patients.

~ *Dedication* ~

Honorable John Edward Fenton Jr.

The Cancer Care team wishes to dedicate this year's report to a long-time and dear friend of Holy Family Hospital, the Honorable John Edward Fenton Jr. for his service to the hospital, our patients and the communities we serve. As a former board chairman and trustee on our Board of Directors, John Fenton Jr. participated in many milestones at the hospital, including most recently, the groundbreaking of our new Emergency Center and our 60th anniversary celebration. John Fenton Jr. was a distinguished leader with a commitment to quality, service and excellence. He received many honors and awards including the Caritas Christi Medal for distinguished service in the health care field. His indelible mark on our history and our future will carry on as the original hospital building was rededicated in his name and honor. Among his many passions, he always enjoyed coming to the hospital to discuss issues involving the hospital and health care in general. We will never forget his contributions and commitment.

New Physician

Jonathan M. Glanzman, MD - Radiation Oncologist

Medical School: Albert Einstein College of Medicine, NY

Internship: Albert Einstein/ Montefiore Medical Center, Internal Medicine

Residency 1: Albert Einstein/ Montefiore Medical Center, Internal Medicine

Residency 2: Albert Einstein/ Montefiore Medical Center, Radiation Oncology

Board Certifications: American Board of Internal Medicine, Radiation Physics & Radiobiology

Glossary

Adjuvant - additional cancer treatment given after the primary treatment to lower the risk that the cancer will come back.

Diagnostic - scientific methods used to establish the cause and nature of a disease, confirm a diagnosis, identify the type of cancer, or determine the stage of the cancer.

Multidisciplinary - a team of professionals with varied qualifications working together; an efficient and effective approach to complex challenges such as cancer care.

Oncology - the study of cancer.

Prognostic - an indicator of the course of the cancer; the prognosis predicts the outcome and therefore the future for the patient.

Standard of Care - a diagnostic and treatment process that a clinician should follow for a certain type of patient, illness, or clinical circumstance.

Cancer Committee 2014

Laura Caprario, MD, Chairman
Director of Medical Oncology

Gentry Thatcher, MD
Otolaryngology, Cancer Liaison Physician

Beth Chaves, RT
Chief Radiation Therapist

Brenda Cloutier, RN
Clinical Research Coordinator

Autumn DeLorme, MS, CCC-SLP
Speech Therapy

Jeffrey Doucette, RN
Steward HomeCare

William Edwards, MD
President, Medical Staff

Kathryn Ferguson, RD, LDN
Nutrition

David Goff, MD
Radiation Oncology

Brenda Holter, RN
Breast Health Navigator

Karen Kennedy
Community Outreach

Raana Khavandgar, RPh
General Surgery

Veronica Martinez
Cancer Registry

Ankur Mehta, MD
Medical Oncology

Robert Moore, MD
General Surgery

Lindsey Nicholson
American Cancer Society

Christine Ouellet, RN
Nursing Manager

Prodyut Poddar, MD
Thoracic Surgeon

Donald Ross, MD, PhD
Chief of Pathology

Anne Saffie, CTR
Cancer Registry Manager

Anthony Slabacheski
Cancer Program Director

Erin Solomon, LicSW
Social Services

Deborah Stanisewski, PT
Physical Therapy

Jill Thresher
Cancer Registry

Arthur Zerbey, MD
Chief of Radiology

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978-687-0151
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Holy Family Oncology Services Telephone Directory

Hospital Main Information: (978) 687-0151

Breast Care Center: (978) 687-0156 Ext. 4179
- **Direct Line: (978) 686-6492**
- Bone Densitometry
- Breast Self-Examination Education
- Breast Ultrasounds
- Digital Mammograms
- Ductograms
- FNA
- Mammography Unit
- Needle Localizations
- Sentinel Node Injection
- Stereotactic Breast Biopsy
- Surgeon Consultations
- Ultrasound Guided Core Biopsy
- Ultrasound Guided Cyst Aspirations
- **Certified Breast Health Navigator – Brenda Holter, RN, BHN: Ext. 2961**

Cancer Registry Services: Ext. 2101

Clinical Trials/Research: Ext. 2117

Gynecological Surgical Oncology Clinic: Ext. 2021

Hematology/Oncology Outpatient Services: Ext. 2021
- Blood and Platelet Transfusion
- Chemotherapy
- Colorectal Screening
- Head & Neck Cancer Screenings
- Immunotherapy, Targeted Therapy
- Multidisciplinary Consultations
- Prostate Cancer Screenings
- Skin/Melanoma Cancer Screenings

New England PET Imaging System: (978) 689-4738

Nuclear Medicine: Ext. 2464
- I-131 Treatment for Thyroid Cancer

Oncology Unit/Inpatient – St. Camillus: Ext. 2650

Pain Clinic: Ext. 2415

Patient Advocate: Ext. 2399

Patient Resource Library: Ext. 2101

Radiation Oncology: Ext. 2089
- Linear Accelerator
- Stereotactic Radiosurgery (SRS)
- Brain Implant Program
- Transperineal Prostate Implant Program
- High Dose Rate Brachytherapy
- Intensity Modulated Radiation Therapy (IMRT)
- Image Guided Radiotherapy (IGRT)
- Respiratory Gating
- Stereotactic Body Radiotherapy (SBRT)
- Mammosite Brachytherapy
- MRI
- Gynecologic Implant Program
- Multidisciplinary Consultations

Radiology Services: Ext. 2068
- CT Scanner
- Diagnostic X-rays
- MRI
- Nuclear Medicine
- Ultrasound
- Special Procedures including Interventional Radiology

Rehabilitation Services: Ext. 2050
- Physical/Occupational Therapy
- Lymphedema Program
- Speech and Swallowing Therapy

Smoking Cessation Program: Ext. 2301

Support Services
- **Nutritional Services: Ext. 2161**
- **Social Services: Ext. 2405**
  - Home Care/VNA
  - Hospice Care
- **Spiritual Care: Ext. 2136**
- **Support Groups:**
  - Breast Cancer:
  - Brenda Holter, RN, BHN: Ext. 2218
  - General Cancer: Ext. 2021
  - Look Good Feel Better: Ext. 2021
- **Wound/Ostomy/Continence Clinic: Ext. 2034**

Surgical Services: Ext. 2500
- Navigational System for Brain Tumors
- Laparoscopic Surgery
- Sentinel Node Mapping
- Stereotactic Brain Biopsy

Thoracic Surgical Clinic: (781) 932-6487
- Minimally Invasive Surgery